From: John Carr <jcarr@awec.solutions>

Sent time: 11/07/2018 10:32:23 AM

To: S.Wood@resolutefp.com; Sara.Oneill@shell.com; sobrien@baf.com; [redacted] ; merrricks@byui.edu; teresa.acosta@calpinesolutions.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; [redacted] rgreenwell@uetllc.com; [redacted] SteveHarper@thisisnoble.com; rick.kunz@shell.com; mary.mccordic@shell.com; robert.pierce@shell.com; jpino@uetllc.com; RicharND@bp.com; randy.schultz@bp.com; Ted@cmsnaturalgas.com; williwk@bp.com; Aldis Raisters <Aldis.Raisters@gapac.com>; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamaee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Bill Gillmore <billmg@penwool.com>; Bill Smith <Bill.Smith@airliquide.com>; Boz Van Houten <vanhoutb@ohsu.edu>; Brad Beavers <bbeavers@timberproducts.com>; Brad Mongrain <bmongrain@wlinpco.com>; Brad Van Cleve <bvc@dvclaw.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@nippondynawave.com>; Bruce Wittmann <WittmannConsultingLLC@outlook.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted] ; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <Chris_h@columbiasteel.com>; Chris Ingram <chris.ingram@recsilicon.com>; Clay Riding <clayr@nw-iw.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leone <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Daniel Riley <daniel.t.riley@tsocorp.com>; Daryll Fuentes <dfuentes@usg.com>; Dave Post <Dave.Post@wahchang.com>; David A Barge <David.A.Barge@tsocorp.com>; David Clemens <david.clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Jones <david.jones@swansongroup.biz>; David Mitcheltree <DBM@eesconsulting.com>; David Tobin <DavidTobin@boisepaper.com>; Dean Gallinger <dean.m.gallinger@boeing.com>; Delee Shoemaker <delees@microsoft.com>; Don Hendrickson <donald.j.hendrickson@boeing.com>; Don Sturtevant <don.sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Gilpin <Drew.Gilpin@evrazna.com>; Ed Coghlan <Ed.coghlan@onsemi.com>; Ed Finklea <efinklea@awec.solutions>; Eric Streicher <Eric.Streicher@airgas.com>; Fawn Barrie <fbarrie@legadv.com>; Fuller, Eric <efuller@precastcorp.com>; Gary Collison <GCollison@pccstructurals com>; Greg Miller <greg.miller@weyerhaeuser.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Hugh Pierce <Hugh.O.Pierce@tsocorp.com>; Irene Plenefisch <irenep@microsoft.com>; Jake Evans <Jake.evans@onsemi.com>; James Price <JaDPrice@gapac.com>; Janese Pierson <Janese.Pierson@ipaper.com>; Jared Sommer <sommerj@byui.edu>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jena Hackett <Jena.Hackett@ipaper.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jenny Dresler <jenny@pacounsel.org>; Jim Duke <jduke@idahoan.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; Joe Burrell <Joseph.g.burrell@jci.com>; John Carr <jcarr@awec.solutions>; John Carr <jcarr@icnu.org>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell.com>; Josh D. Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Kelly Francone <kfrancone@energystrat.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Kyle Williams <williamsk@byui.edu>; Kyle Yearlsey <KyleYearsley@bc.com>; Larry Voos <larry.voos@norpacpaper.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Leslie Adams <adamsla@airproducts.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Martha Cox <Martha_C@columbiasteel.com>; Marty Sedler <marty.sedler@intel.com>; Mary Catherine McAleer <marycatherine.mcaleer@weyerhaeuser.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <Matt.Upmeyer@lambweston.com>; Melissa Gomboskey <[redacted] ; Michael Broughton <michael.l.broughton@boeing com>; Michael Culver <michael.culver@ipaper.com>; Michael Slattery <Michael.slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mike Thoennes <mthoennes@wlinpco.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Nick Avenetti <nick@perlite.com>; Ortiz, Patrick W <Patrick.Ortiz@kapstonepaper.com>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <PLydon@lhs.org>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Richard White <richard.a.white7@boeing.com>; Rick Parker <rjparker@scattercreek.com>; Rick Stricker <rstricker@baf.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ron Johnson <Ron.Johnson@airliquide.com>; Ron Williams <ron@williamsbradbury.com>; Ryan Beaver <Ryan.beaver@weyerhaeuser.com>; Sam Liebelt <Samuel.Liebelt@kapstonepaper.com>; Samantha Julian <Samanthaj@pacounsel.org>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <Sgutting@energystrat.com>; Scott Hawley <Scott.R.Hawley@tsocorp.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skyler Mlasko <Skyler.Mlasko@northwesthardwoods.com>; Spiro Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steve Doss <SDoss@wlinpco.com>; Steven Castracane <steven.castracane@linde.com>; Thomas Moore <tmoore@wlinpco.com>; Tim Boyd <[redacted] >; Tim Root <Timothy.Root@axiall.com>; Todd Wiseman <todd.wiseman@solvay.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tom Yarborough <tom@richlandpaper.com>; Trudy Slagle <Trudy.Slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw com>; Wes Hill <Wes.Hill@gapac.com>; Willaim McSherry <william.mcsherry@boeing.com>; William McMahon <wiliam.mcmahon@ipaper.com>; Tony Hardenbrook

Subject: AWEC Annual Member Meeting in Seattle on November 13, 2018

Attachments: AWEC Member Meeting Agenda Nov 13 2018.pdf

Dear AWEC Members:

I would like to welcome our members to the first annual member meeting of the Alliance of Western Energy Consumers on Tuesday, November 13th.

Our meeting is at the Seattle Hilton Airport Hotel and Conference Center. For the electric-member meeting, a full breakfast will be served beginning at 8:00 am, with the business portion of the meeting scheduled from **9:00 am to 11:30 for electric members only.**

At 11:30 we will hold our annual meeting section for both electric and gas members during which we will elect new officers, with lunch following. Our guest speaker, Elliot Mainzer, BPA Administrator. will follow the luncheon**.**

For the natural gas members and affiliates only, the natural gas portion of the meeting will begin at 1:30 PST.

Call-in information can be found at the top of the attached agenda. The complete documents will be sent out the day before the meeting.

Please RSVP to kfrancone@energystrat.com if you haven't done so.

Please let us know if you have any questions.

Regards,

John

--

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell: [redacted]
Website: http://www.awec.solutions
E-mail: jcarr@awec.solutions

From: John Carr <jcarr@awec.solutions>

Sent time: 11/20/2018 11:11:39 AM

To: S.Wood@resolutefp.com; Aldis Raisters <Aldis.Raisters@gapac.com>; Alex Koleber; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamaee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Bill Gillmore <billmg@penwool.com>; Bill Smith <Bill.Smith@airliquide.com>; Boz Van Houten <vanhoutb@ohsu.edu>; Brad Beavers <bbeavers@timberproducts.com>; Brad Mongrain <bmongrain@wlinpco.com>; Brian Wood <brian.wood@nippondynawave.com>; Bruce Wittmann <WittmannConsultingLLC@outlook.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <Chris_h@columbiasteel.com>; Chris Ingram <chris.ingram@recsilicon.com>; Clay Riding <clayr@nw-iw.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leone <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Daniel Riley <daniel.t.riley@tsocorp.com>; Daryll Fuentes <dfuentes@usg.com>; Dave Post <Dave.Post@wahchang.com>; David A Barge <David.A.Barge@tsocorp.com>; David Clemens <david.clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; David Mitcheltree <DBM@eesconsulting.com>; David Tobin <DavidTobin@boisepaper.com>; Dean Gallinger <dean.m.gallinger@boeing.com>; Delee Shoemaker <delees@microsoft.com>; Desiree Higgins; Don Hendrickson <donald.j.hendrickson@boeing.com>; Don Sturtevant <don.sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Gilpin <Drew.Gilpin@evrazna.com>; Eric Streicher <Eric.Streicher@airgas.com>; Fawn Barrie <fbarrie@legadv.com>; Fuller, Eric <efuller@precastcorp.com>; Gary Collison <GCollison@pccstructurals.com>; Greg Miller <greg.miller@weyerhaeuser.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Hugh Pierce <Hugh.O.Pierce@tsocorp.com>; Irene Plenefisch <irenep@microsoft.com>; Jake Evans <Jake.evans@onsemi.com>; James Price <JaDPrice@gapac.com>; Janese Pierson <Janese Pierson@ipaper.com>; Jared Sommer <sommerj@byui.edu>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jena Hackett <Jena.Hackett@ipaper.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jenny Dresler <jenny@pacounsel.org>; Jim Duke <jduke@idahoan.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; Joe Burrell <Joseph.g.burrell@jci.com>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell.com>; Josh D. Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Kyle Williams <williamsk@byui.edu>; Kyle Yearlsey <KyleYearsley@bc.com>; Larry Voos <larry.voos@norpacpaper.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Leslie Adams <adamsla@airproducts.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Martha Cox <Martha_C@columbiasteel.com>; Marty Sedler <marty.sedler@intel.com>; Mary Catherine McAleer <marycatherine.mcaleer@weyerhaeuser.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <Matt.Upmeyer@lambweston.com>; Melissa Gomboskey <[redacted]; Michael Broughton <michael.l.broughton@boeing.com>; Michael Culver <michael.culver@ipaper.com>; Michael Slattery <Michael.slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mike Thoennes <mthoennes@wlinpco.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Nick Avenetti <nick@perlite.com>; Ortiz, Patrick W <Patrick.Ortiz@kapstonepaper.com>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <PLydon@lhs.org>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Paul Langley; Phil Foss <phil.foss@onsemi.com>; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Richard White <richard.a.white7@boeing.com>; Rick Parker <rjparker@scattercreek.com>; Rick Stricker <rstricker@baf.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ron Williams <ron@williamsbradbury.com>; Ryan Beaver <Ryan.beaver@weyerhaeuser.com>; Sam Liebelt <Samuel.Liebelt@kapstonepaper.com>; Samantha Julian <Samanthaj@pacounsel.org>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <Sgutting@energystrat.com>; Scott Hawley <Scott.R.Hawley@tsocorp.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skyler Mlasko <Skyler.Mlasko@northwesthardwoods.com>; Spiro Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steven Castracane <steven.castracane@linde.com>; Thomas Moore <tmoore@wlinpco.com>; Tim Boyd <[redacted]>; Tim Root <Timothy.Root@axiall.com>; Todd Wiseman <todd.wiseman@solvay.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tom Yarborough <tom@richlandpaper.com>; Tony Hardenbrook; Trudy Slagle <Trudy.Slagle@lambweston.com>; Wes Hill <Wes.Hill@gapac.com>; Willaim McSherry <william.mcsherry@boeing.com>; William McMahon <wiliam.mcmahon@ipaper.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Kelly Francone <kfrancone@energystrat.com>

Cc: John Carr <jcarr@awec.solutions>; Ed Finklea <efinklea@awec.solutions>; Tyler Pepple <tcp@dvclaw.com>

Subject: AWEC Organizational Update

Greetings AWEC Members,

I am pleased to announce on behalf of the AWEC Board of Directors that there will no longer be separate electric and natural gas members in the Alliance of Western Energy Consumers' organization. All current electric and gas members are now simply "AWEC Members".

This change will benefit all of our current members, and is another big step in realizing all the potential advantages of the merger.

Please let me know if you have any questions.

May you enjoy a wonderful Thanksgiving Holiday,

John

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell: [redacted]

Website: http://www.awec.solutions
E-mail: jcarr@awec.solutions

From:	John Carr <jcarr@awec.solutions>
Sent time:	11/13/2018 08:29:03 AM
To:	Tony Hardenbrook
Subject:	Re: University of Oregon Membership

Hi Tony,
Congrats!
You are officially a member.
We'll be getting some follow up info to you soon.
Cheers,
John

Sent from my iPhone

On Nov 13, 2018, at 7:46 AM, Tony Hardenbrook <aharden2@uoregon.edu> wrote:

Hi John,

Some issues at the central plant at UO have kept me from being able to attend today. I'll be tuned in using the call-in numbers provided. I apologize for missing the conference meeting in person, please let me know if UO will be able to become a member of AWEC, thanks.

R/
Tony

Tony Hardenbrook
Director of Utilities and Energy
Campus Planning and Facilities Management
University of Oregon
aharden2@uoregon.edu
541-346-9007

Safety * Continuity * Efficiency

From: John Carr <jcarr@awec.solutions>
Sent: Wednesday, October 31, 2018 9:28 AM
To: Tony Hardenbrook <aharden2@uoregon.edu>
Cc: Alex Koleber <akoleber@uoregon.edu>; Boz Van Houten <bozv@uoregon.edu>; 'Kelly Francone' <kfrancone@energystrat.com>
Subject: RE: University of Oregon Membership

Greetings Tony,

Yes, I would be happy for you to attend our November 13th Annual Meeting as my guest.

I've copied Kelly on this email. She will send you the info needed to attend the Annual Meeting.

In terms of process, I will be taking your membership request to the AWEC Board of Directors for approval on the evening of November 12th. I will be strongly supporting it.

Thank you for request for membership. You will find that we are member-focused, efficient and highly effective.

I would ask that you not share the proposed level of dues with other members or entities. I and my back office are the only ones who know the dues individual members pay.

Best regards,

John

From: Tony Hardenbrook <aharden2@uoregon.edu>
Sent: Wednesday, October 31, 2018 8:09 AM
To: John Carr <jcarr@awec.solutions>
Cc: Alex Koleber <akoleber@uoregon.edu>; Boz Van Houten <bozv@uoregon.edu>
Subject: RE: University of Oregon Membership

John,

Please consider this a formal request for membership, I also sent a request via the AWEC website.

It's a little late in the game, but is there a way for UO to attend the November 13th conference in Seattle?

Respectfully,
Tony

Tony Hardenbrook
Director of Utilities and Energy
Campus Planning and Facilities Management
University of Oregon
aharden2@uoregon.edu
541-346-9007

Safety * Continuity * Efficiency

From: Boz Van Houten
Sent: Tuesday, October 30, 2018 4:56 PM
To: John Carr <jcarr@awec.solutions>
Cc: Alex Koleber <akoleber@uoregon.edu>; Tony Hardenbrook <aharden2@uoregon.edu>
Subject: Re: University of Oregon Membership

Thanks for the membreship info, John!
We will discuss this internally and I will get back to you with our decision.

Cheers!
Boz Van Houten CEM
UO Energy Manager

-------- Original message --------
From: John Carr <jcarr@awec.solutions>
Date: 10/30/18 4:06 PM (GMT-08:00)
To: Boz Van Houten <bozv@uoregon.edu>
Cc: Alex Koleber <akoleber@uoregon.edu>
Subject: RE: University of Oregon Membership

Greetings Boz,

The annual AWEC assessment for UO would be $13,076, or $3,269/quarter. This would cover UO for both electric and natural gas issues.

Since it's late in the year, if UO becomes a member now, I wouldn't start charging for membership until the first quarter of 2019. I could probably work with you on the level of the first-quarter assessment too, if that is an issue.

If this is acceptable, please send me an email requesting membership for UO in AWEC. I'll bring the request before the AWEC Board of Directors at their November 12th evening meeting. I will strongly support approval of the request.

Best of regards,

John

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell: [redacted]
Website: https://www.awec.solutions/
E-mail: jcarr@awec.solutions

From: Boz Van Houten <bozv@uoregon.edu>
Sent: Wednesday, October 24, 2018 10:42 AM
To: jcarr@awec.solutions
Cc: Alex Koleber <akoleber@uoregon.edu>
Subject: University of Oregon Membership

Hi John!
It's been an interesting month with the natural gas pipeline outage and resultant shortage. Really appreciated the timely briefs on the situation from Ed as events unfolded.
Some news and more…

1. I am progressively transitioning out of my role as Energy Manager at OHSU ant into my new position of Energy Manager at University of Oregon in Eugene (my hometown). I am currently busy establishing a structured Energy Management Program at UO
2. Please include Chad Sorber, Director of Facilities (sorber@ohsu.edu), and Laura Jane Schaefer, Sustainability Coordinator (schaefel@ohsu.edu) in OHSU related communications.
3. I am interested in AWEC membership for UO. Please send me an application and indication of proposed fee, etc. UO annual energy use is: 86,908,482 kWh and 3,903,139 Therms. UO's primary utilities are EWEB (Municipal) for Electric and Water, and BP/IGI for Natural Gas. Please copy Alex on your reply.

Thanks!
Boz Van Houten
UO Energy Manager

Campus Planning and Facilities Management
University of Oregon

bozv@uoregon.edu
Desk: 541-346-2223
Mobile: [redacted]

Safety * Continuity * Efficiency

AWEC

CONFIDENTIAL – PLEASE DO NOT DISTRIBUTE

AWEC ANNUAL MEMBER MEETING AGENDA

Seattle Hilton Airport Hotel and Conference Center
Room: Crystal A

Call-in number: [redacted]
Passcode: [redacted]

8:00-9:00 am — *Breakfast*

Electric Section

9:00 am — *Call to Order and Antitrust Statement – John Carr, Executive Director*

1. Brief introduction provided by each AWEC member in attendance and on conference call line

9:05-9:20 am — *Administrative – John Carr*

- Inaugural AWEC Annual Meeting
- March 6, 2019, AWEC Member Meeting, Portland Sheraton Airport Hotel, Keynote speaker - TBD
- June 5 AWEC Gas Member Meeting
- June 5/6, AWEC Joint Electricity/Gas Conference with NWGA – Skamania Lodge
- June 7, AWEC Electric Member Meeting – Skamania Lodge, Keynote speaker – TBD

  September – Written updates to membership
- November 13, AWEC Annual Member Meeting, Seattle Keynote speaker – TBD

2. Financial Update
   - Overview
   - Consolidated 2019 Budget
   - 2019 assessments
3. General organizational update

9:20 - 10:10 am — *Legislative Update*

1. Washington – Tim Boyd
2. Oregon – JL Wilson, Public Affairs Counsel

10:10 – 10:20 am — *Break*

10:20 - 11:20 am *<u>Regulatory Updates – Tyler Pepple and Josh Weber</u>*

BONNEVILLE POWER ADMINISTRATION

1. TC-20 and Settlement Process
2. BP-20 Transmission and Power Rate Proceedings
3. Grid Modernization and Markets Initiative
4. Generation Inputs
5. Customer Pilot Proposal

PORTLAND GENERAL ELECTRIC COMPANY

1. UE 335 – 2018 General Rate Case ("GRC")
2. UM 1934 – Renewable RFP
3. UM 1953 – Green Tariff

PUGET SOUND ENERGY

1. U-180680 – Sale of Macquarie Interest

GENERIC PROCEEDINGS

Oregon

1. SB 978 – Investigation into Utility Regulation
2. AR 614 – New Load Direct Access Rules
3. AR 610 – RPS Rulemaking
4. UM 1909 – Request for Ruling on Costs that Can be Deferred for Later Recovery in Rates

Washington

1. U-161024 – IRP Rule and Process Changes
2. UE-170002/UG-170003 – Cost of Service Collaborative

PACIFICORP

Oregon

1. Inter-Jurisdictional Cost Allocation
   - UM 1824 – Oregon-specific Investigation
   - Multi-State Process ("MSP") Workgroup
2. UE 339 – Transition Adjustment Mechanism
3. UM 1968 – Depreciation Study
4. LC 70 – 2019 IRP

Washington

1. UE-180494 – 2017 PCAM
2. UE-180778 – Depreciation Study

AVISTA

1. UE-170970 – Avista/Hydro One Merger

Annual Members' Meeting Call to Order – John Carr, Executive Director

1. Vote on slate of proposed Board members and Officers – John
2. New business – John
3. Adjourn- John

<u>Electric and Natural Gas Members' Lunch and Keynote Speaker</u>

12:00 – 12:30 pm *<u>Luncheon</u>*

12:30 -1:00 pm *<u>Guest Speaker</u>* – Elliot Mainzer – BPA Administrator

<u>Natural Gas Section</u>

1:00 – 1:05 pm *<u>Administrative – Ed Finklea, Director of Natural Gas</u>*

1:05 – 2:15 pm Enbridge Pipeline Disruption: Guest speakers: Gary Venz (Williams and Northwest Pipeline) and Rich Rautenbach (Enbridge)

2:15 – 3:30 pm *<u>Regulatory and Legislative Updates – Chad Stokes and Tommy Brooks</u>*

WASHINGTON

1. Puget Sound Energy – Tariff Issue with Curtailments and Entitlements
2. Cascade Rate Case (UG-170929)
3. Cost of Service Collaborative (UG-170003)
4. Purchased Gas Adjustments (Puget, Cascade, NW Natural, Avista)

OREGON

1. NW Natural Rate Case (UG-344)
2. Investigation to defer Capital Costs (UM 1909)
3. Cascade Rate Case (UG 347)
4. Purchased Gas Adjustments (NW Natural, Avista and Cascade)

IDAHO

1. Intermountain Safety Tracker Proposal (INT-G-17-07)
2. Intermountain Proceeding on Tax Cuts and Jobs Act (GNR-U-18-01)

OREGON/WASHINGTON

1. Hydro One Purchase of Avista (UM 1897)

FEDERAL

1. Gas Transmission Northwest—rate reduction from Tax Cuts and Jobs Act
2. Northwest Pipeline—Tax Cuts and Jobs Acts Update

3:30 pm *Adjourn* – John Carr

From: John Carr <jcarr@awec.solutions>

Sent time: 12/20/2018 10:50:35 AM

To: sorber@ohsu.edu; Fuller, Eric <efuller@precastcorp.com>; Eric Streicher <Eric.Streicher@airgas.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Leslie Adams <adamsla@airproducts.com>; Pat Lydon <PLydon@lhs.org>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Pat Ealy <pat.ealy@akzonobel.com>; Ortiz, Patrick W <Patrick.Ortiz@kapstonepaper.com>; Tim Root <Timothy.Root@axiall.com>; Drew Bryck <drew.m.bryck@boeing.com>; Dave Post <Dave.Post@wahchang.com>; David A Barge <David.A.Barge@tsocorp.com>; David Elliot <davidelliott@boisebuilding.com>; Chris Horn <Chris_H@columbiasteel.com>; David Clemens <David.Clemens@darigold.com>; John Bob <John.bob@am.dynonobel.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Michael Slattery <Michael.slattery@evrazna.com>; Rob Freres <rtfreres@frereslumber.com>; Aldis Raisters <Aldis.Raisters@gapac.com>; Kevin Rasler <kevin_rasler@iepco.com>; Kevin Davis <kevin_davis@iepco.com>; Marty Sedler <marty.sedler@intel.com>; Jena Hackett <Jena.Hackett@ipaper.com>; Don Sturtevant <don.sturtevant@simplot.com>; Liebelt, Samuel <samuel.liebelt@westrock.com>; Trudy Slagle <trudy.slagle@lambweston.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <Matt.Upmeyer@lambweston.com>; Steven Castracane <steven.castracane@linde.com>; Jim Stanton <jstanton@microsoft.com>; Nick Avenetti <nick@perlite.com>; Nick Kaiser <Nick.Kaiser@nippondynawave.com>; Mark Steele <steele@norpac.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Skyler Mlasko <Skyler.Mlasko@northwesthardwoods.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Greg Vaughn <greg.vaughn@resolutefp.com>; Ken Johnson <ken.johnson@recsilicon.com>; Stan Jackson <S.Jackson@shell.com>; Marcie Peters <marcie.peters@solvay.com>; Sarah Schack <sschack@timberproducts.com>; Tony Hardenbrook; Noel Mak <Noel.Mak@atimetals.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <WittmannConsultingLLC@outlook.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Rick Stricker <rstricker@baf.com>; Kyle Williams <williamsk@byui.edu>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Clay Riding <clayr@nw-iw.com>; Jake Evans <Jake.evans@onsemi.com>; Bill Gillmore <billmg@penwool.com>; David Jones <david.jones@swansongroup.biz>; Daryll Fuentes <dfuentes@usg.com>; Teresa Acosta <teresa.acosta@calpinesolutions.com>; Beth Beatty <Beth@cmsnaturalgas.com>; Randy Schultz <randy.schultz@bp.com>; Justin Pino <jpino@uetllc.com>

Subject: No increase in AWEC assessments for 2019

Greetings AWEC members,

This has been an outstanding year for the organization. We changed our name to the Alliance of Western Energy Consumers, and merged in the members and functions of the Northwest Industrial Gas Users.

The resulting organization is bigger, stronger and more effective.

However, the challenges facing AWEC members regarding reasonable electricity and natural gas prices will continue to increase in 2019. For example, in both Oregon and Washington there will be strong pushes to implement carbon-related taxes or cap-and-trade programs.

Against this backdrop, I'm pleased to announce the AWEC Board of Directors has made a decision to not increase members' assessments in 2019. The synergies and efficiencies of the merger offset any upward cost pressures on the organization.

As always, you have my commitment to lead the AWEC team to insure we focus on the highest-priority tasks while staying within the budget.

We appreciate your support and will continue to be the leading advocate for industry on issues related to the use and affordability of electric and natural gas energy.

On behalf of the AWEC team, may I wish you and yours the happiest of Holidays.

With best regards,

John

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell:
Website: https://www.awec.solutions/
E-mail: jcarr@awec.solutions

From: John Carr <jcarr@awec.solutions>

Sent time: 12/20/2018 11:04:53 AM

To: S.Wood@resolutefp.com; sorber@ohsu.edu; tbrooks@cablehuston.com; Aldis Raisters <Aldis.Raisters@gapac.com>; Alex Koleber; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamaee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Bill Smith <Bill.Smith@airliquide.com>; Boz Van Houten <vanhoutb@ohsu.edu>; Brad Beavers <bbeavers@timberproducts.com>; Brad Mongrain <bmongrain@wlinpco.com>; Brad Van Cleve <bvc@dvclaw.com>; Bradley Mullins <brmullins@mwanalytics.com>; Bruce Wittmann <WittmannConsultingLLC@outlook.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <Chris_h@columbiasteel.com>; Chris Ingram <chris.ingram@recsilicon.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Cynthia Leone <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Daniel Riley <daniel.t.riley@tsocorp.com>; Dave Post <Dave.Post@wahchang.com>; David A Barge <David.A.Barge@tsocorp.com>; David Clemens <david.clemens@darigold.com>; David Mitcheltree <DBM@eesconsulting.com>; David Tobin <DavidTobin@boisepaper.com>; Dean Gallinger <dean.m.gallinger@boeing.com>; Delee Shoemaker <delees@microsoft.com>; Desiree Higgins; Don Hendrickson <donald.j.hendrickson@boeing.com>; Don Sturtevant <don.sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <Drew.Gilpin@evrazna.com>; Eric Streicher <Eric.Streicher@airgas.com>; Fawn Barrie <fbarrie@legadv.com>; Fuller, Eric <efuller@precastcorp.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Hugh Pierce <Hugh.O.Pierce@tsocorp.com>; Irene Plenefisch <irenep@microsoft.com>; Janese Pierson <Janese.Pierson@ipaper.com>; Jena Hackett <Jena.Hackett@ipaper.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Carr <jcarr@awec.solutions>; John Carr <jcarr@icnu.org>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell.com>; Josh D. Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Keith Warner <keith.c.warner@boeing.com>; Kelly Francone <kfrancone@energystrat.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco com>; Khaly Niang <Khaly.Niang@airliquide.com>; Kyle Yearlsey <KyleYearsley@bc.com>; Larry Voos <larry.voos@norpacpaper.com>; Leslie Adams <adamsla@airproducts.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Martha Cox <Martha_C@columbiasteel.com>; Marty Sedler <marty.sedler@intel.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <Matt.Upmeyer@lambweston.com>; Melissa Gomboskey <[redacted]; Michael Culver <michael.culver@ipaper.com>; Michael Slattery <Michael.slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mike Thoennes <mthoennes@wlinpco.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Ortiz, Patrick W <Patrick.Ortiz@kapstonepaper.com>; Pat Ealy <pat.ealy@akzonobel.com>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Richard White <richard.a.white7@boeing.com>; Rick Parker <rjparker@scattercreek.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ron Williams <ron@williamsbradbury.com>; Ryan Beaver <Ryan.beaver@weyerhaeuser.com>; Sam Liebelt <Samuel.Liebelt@kapstonepaper.com>; Samantha Julian <Samanthaj@pacounsel.org>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <Sgutting@energystrat.com>; Scott Hawley <Scott.R.Hawley@tsocorp.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skyler Mlasko <Skyler.Mlasko@northwesthardwoods.com>; Spiro Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steven Castracane <steven.castracane@linde.com>; Thomas Moore <tmoore@wlinpco.com>; Tim Boyd <[redacted]>; Tim Root <Timothy.Root@axiall.com>; Todd Wiseman <todd.wiseman@solvay.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tom Yarborough <tom@richlandpaper.com>; Tony Hardenbrook; Trudy Slagle <Trudy.Slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Wes Hill <Wes.Hill@gapac.com>; Willaim McSherry <william.mcsherry@boeing.com>; William McMahon <wiliam.mcmahon@ipaper.com>; Rick Stricker <rstricker@baf.com>; Kyle Williams <williamsk@byui.edu>; Joe Burrell <Joseph.g.burrell@jci.com>; Jim Duke <jduke@idahoan.com>; Nick Avenetti <nick@perlite.com>; David Jones <david.jones@swansongroup.biz>; Clay Riding <clayr@nw-iw.com>; Jake Evans <Jake.evans@onsemi.com>; Ed Coghlan <ed.coghlan@onsemi.com>; Bill Gillmore <billmg@penwool.com>; Daryll Fuentes <dfuentes@usg.com>; Teresa Acosta <teresa.acosta@calpinesolutions.com>; Beth Beatty <Beth@cmsnaturalgas.com>; Randy Schultz <randy.schultz@bp.com>; Justin Pino <jpino@uetllc.com>; Chad Stokes <cstokes@cablehuston.com>; Gary Londo <gary.j.londo@boeing.com>; James Price <JaDPrice@gapac.com>; Jared Sommer <sommerj@byui.edu>; Mary McCordic <mary.mccordic@shell.com>; Mary Catherine McAleer <marycatherine.mcaleer@weyerhaeuser.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Sam Merrick <merricks@byui.edu>; Sharon Andersen <Sharon.w.anderson@intel.com>; Steve O'Brien <sobrienj@byui.edu>

Cc: Ed Finklea <efinklea@awec.solutions>

Subject: AWEC November 13th Annual Member Meeting Minutes

Attachments: AWEC Minutes for November 13 2018 Member Meeting.docx

---

AWEC members,

Please find attached the minutes from our annual member meeting held in Seattle on November 13th.

--

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell: [redacted]
Website: http://www.awec.solutions
E-mail: jcarr@awec.solutions

From: John Carr <jcarr@awec.solutions>

Sent time: 12/03/2018 10:32:57 AM

To: S.Wood@resolutefp.com; ed.coghlan@onsemi.com; merrricks@byui.edu; pallen@uetllc.com; Ted@cmsnaturalgas.com; Aldis Raisters <Aldis.Raisters@gapac.com>; Alex Koleber; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamaee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Bill Gillmore <billmg@penwool.com>; Bill Smith <Bill.Smith@airliquide.com>; Boz Van Houten <vanhoutb@ohsu.edu>; Brad Beavers <bbeavers@timberproducts.com>; Brad Mongrain <bmongrain@wlinpco.com>; Brad Van Cleve <bvc@dvclaw.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@nippondynawave.com>; Bruce Wittmann <WittmannConsultingLLC@outlook.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <Chris_h@columbiasteel.com>; Chris Ingram <chris ingram@recsilicon.com>; Clay Riding <clayr@nw-iw.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leone <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Daniel Riley <daniel.t.riley@tsocorp.com>; Daryll Fuentes <dfuentes@usg.com>; Dave Post <Dave.Post@wahchang.com>; David A Barge <David.A.Barge@tsocorp.com>; David Clemens <david.clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; David Mitcheltree <DBM@eesconsulting.com>; David Tobin <DavidTobin@boisepaper.com>; Dean Gallinger <dean.m.gallinger@boeing.com>; Delee Shoemaker <delees@microsoft.com>; Desiree Higgins; Don Hendrickson <donald.j.hendrickson@boeing.com>; Don Sturtevant <don.sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Gilpin <Drew.Gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Eric Streicher <Eric.Streicher@airgas.com>; Fawn Barrie <fbarrie@legadv com>; Fuller, Eric <efuller@precastcorp.com>; Gary Collison <GCollison@pccstructurals.com>; Gary Londo <gary.j.londo@boeing.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Hugh Pierce <Hugh.O.Pierce@tsocorp.com>; Irene Plenefisch <irenep@microsoft.com>; Jake Evans <Jake.evans@onsemi.com>; James Price <JaDPrice@gapac.com>; Janese Pierson <Janese Pierson@ipaper.com>; Jared Sommer <sommerj@byui.edu>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jena Hackett <Jena.Hackett@ipaper.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jenny Dresler <jenny@pacounsel.org>; Jim Duke <jduke@idahoan.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; Joe Burrell <Joseph.g.burrell@jci.com>; John Carr <jcarr@awec.solutions>; John Carr <jcarr@icnu.org>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell.com>; Josh D. Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Kelly Francone <kfrancone@energystrat.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Kyle Williams <williamsk@byui.edu>; Kyle Yearlsey <KyleYearsley@bc.com>; Larry Voos <larry.voos@norpacpaper.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Leslie Adams <adamsla@airproducts.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Martha Cox <Martha_C@columbiasteel.com>; Marty Sedler <marty.sedler@intel.com>; Mary Catherine McAleer <marycatherine.mcaleer@weyerhaeuser.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <Matt.Upmeyer@lambweston.com>; Melissa Gomboskey <[redacted]; Michael Broughton <michael.l.broughton@boeing.com>; Michael Culver <michael.culver@ipaper.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mike Thoennes <mthoennes@wlinpco.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Nick Avenetti <nick@perlite.com>; Noel Mak <Noel.Mak@atimetals.com>; Ortiz, Patrick W <Patrick.Ortiz@kapstonepaper.com>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <PLydon@lhs.org>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Richard White <richard.a.white7@boeing.com>; Rick Parker <rjparker@scattercreek.com>; Rick Stricker <rstricker@baf.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ron Williams <ron@williamsbradbury.com>; Ryan Beaver <Ryan.beaver@weyerhaeuser.com>; Sam Liebelt <Samuel.Liebelt@kapstonepaper.com>; Samantha Julian <Samanthaj@pacounsel.org>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <Sgutting@energystrat.com>; Scott Hawley <Scott.R.Hawley@tsocorp.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Sharon Andersen <Sharon.w.anderson@intel.com>; Skyler Mlasko <Skyler.Mlasko@northwesthardwoods.com>; Spiro Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steven Castracane <steven.castracane@linde.com>; Thomas Moore <tmoore@wlinpco.com>; Tim Boyd <[redacted]>; Tim Root <Timothy.Root@axiall.com>; Todd Wiseman <todd.wiseman@solvay com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tom Yarborough <tom@richlandpaper.com>; Tony Hardenbrook; Trudy Slagle <Trudy.Slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Wes Hill <Wes.Hill@gapac com>; Willaim McSherry <william.mcsherry@boeing.com>; William McMahon <wiliam.mcmahon@ipaper.com>; Nancy Richardson <Nancy.richardson@bp.com>; Beth Beatty <Beth@cmsnaturalgas.com>; Doug Betzold <CMS@cmsnaturalgas.com>; James Clarken <James_Clarken@oxy.com>; Chuck Gates <[redacted]; Rick Harper <[redacted]; Steve Harper <SteveHarper@thisisnoble.com>; Rick Kunz <rick.kunz@shell.com>; Mary McCordic <mary.mccordic@shell.com>; Robert Pierce <robert.pierce@shell.com>; Justin Pino <jpino@uetllc.com>; Randy Schultz <randy.schultz@bp.com>; Rusty Williams <williwk@bp.com>; Phil Foss <phil.foss@onsemi.com>

Subject: Fwd: PNG Taskforce Webinar Follow Up (Westcoast link)

AWEC Members,.

Our Gas Director, Ed Finklea, spoke on Friday with Enbridge officials about timing of integrity work in light of a forecasted coldspell coming mid-week. Enbridge will post either during the evening of December 2nd or the morning of December 3rd regarding any potential shift in the work to the upcoming weekend to try to minimize. Look for this posting if your gas operations or purchasing could be impacted by the timing of the integrity work.

Regards,

John

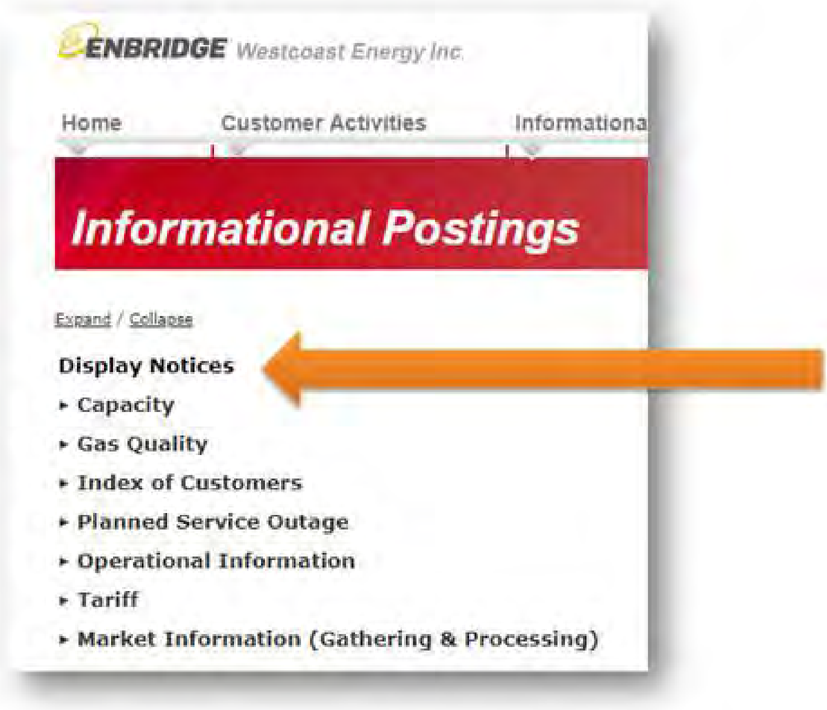
To: The Power & Natural Gas Planning Taskforce

As we discussed during today's webinar, please find below the link to the Enbridge Westcoast Pipeline notice board along with a recent posting. A big thank you to Brennen for sharing the link and giving the Taskforce an update on the webinar.

https://noms.wei-pipeline.com/notices/ci_notice.show_list

The notices can also be reached by clicking on "Display Notices" while on the primary Westcoast website:

https://noms.wei-pipeline.com/info/



Below is a notice that was posted today regarding expected capacity at Huntingdon:

Westcoast Energy Inc.
Critical Notice
Curtailment - Pipeline
Notice: #51179 **Revision:** #0

Subject: **BC Pipeline Operational Upset - Transmission South Update - November 30, 2018**

Summary: BC Pipeline Operational Upset - Transmission South Update - November 30, 2018

Enbridge continues to advance the return-to-service plan of its T-South natural gas transmission system following the rupture that occurred near Prince George, British Columbia, on October 9, 2018.

Enbridge filed the engineering assessment to operate the 36" pipeline on the segment from Station 9 to Huntingdon, commonly referred to as 9L2, at maximum operating pressure on November 19, 2018 (referred to in Notice #51100 posted on November 17, 2018). Today the NEB issued an amending order to increase the operating pressure on the 9L2 segment to its maximum operating pressure. Enbridge expects an increase in capacity at Huntingdon to approximately 1.4 Bcf/d. The capacity on the system will be gradually increased over the next few days and there may be daily capacity fluctuations while Enbridge does the work required to increase capacity and stabilize the system.

The daily available capacity for December 1, 2018 – December 3, 2018 will be posted on the Customer Interface shortly.

Work will continue to complete engineering assessments on the remaining 36" pipe segments. Once approval from the NEB is granted, these pipe segments will be brought back safely to normal operating pressure. More information on expected timing and capacity gains from these segments returning to normal operating pressure will be provided in future notices.

--

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell:
Website: http://www.awec.solutions
E-mail: jcarr@awec.solutions

From: John Carr <jcarr@awec.solutions>

Sent time: 01/22/2019 08:13:34 AM

To: Aldis Raisters <Aldis.Raisters@gapac.com>; Alex Koleber; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamaee <bmcnamee@timberproducts.com>; Beth Beatty <beth@cmsnaturalgas.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Bill Gillmore <billmg@penwool.com>; Bill Smith <Bill.Smith@airliquide.com>; Boz Van Houten <vanhoutb@ohsu.edu>; Brad Beavers <bbeavers@timberproducts.com>; Brad Van Cleve <bvc@dvclaw.com>; Brian Wood <brian.wood@nippondynawave.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <[redacted]>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Chad Sorber <sorber@ohsu.edu>; Chad Stokes <cstokes@cablehuston.com>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <Chris_h@columbiasteel.com>; Chris Ingram <chris.ingram@recsilicon.com>; Chuck Gates <[redacted]; Clay Riding <clayr@nw-iw.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Courtney Smith <courtney.smith@shell.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leone <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Daniel Riley <daniel.t.riley@tsocorp.com>; Daryll Fuentes <dfuentes@usg.com>; Dave Post <Dave.Post@wahchang.com>; David A Barge <DABarge@marathonpetroleum.com>; David Clemens <david.clemens@darigold com>; David Elliot <davidelliott@boisebuilding.com>; David Hawk <[redacted]>; David Jones <david.jones@swansongroup.biz>; David Mitcheltree <DBM@eesconsulting.com>; David Tobin <DavidTobin@boisepaper.com>; Dean Gallinger <dean.m.gallinger@boeing.com>; Delee Shoemaker <delees@microsoft.com>; Desiree Higgins; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <don.sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Betzold <CMS@cmsnaturalgas.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <Drew.Gilpin@evrazna.com>; Ed Coghlan <Ed.coghlan@onsemi.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@pccstructurals.com>; Eric Streicher <Eric.Streicher@airgas.com>; Fawn Barrie <fbarrie@legadv.com>; Gary Collison <gcollison@pccstructurals.com>; Gary Londo <gary.j.londo@boeing.com>; Hugh Pierce <Hugh.O.Pierce@tsocorp.com>; Irene Plenefisch <irenep@microsoft.com>; Jake Evans <Jake.evans@onsemi.com>; James Clarken <James_Clarken@oxy.com>; James Price <JaDPrice@gapac.com>; Janese Pierson <Janese.Pierson@ipaper.com>; Jared Sommer <sommerj@byui.edu>; Jasmin Simmons <JAMIN.SIMMONS@resolutefp.com>; Jason Hakes <jason.c.hakes@intel.com>; Jason Poulos <jnpoulos@gapac.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jeff Steed <jeff.steed@northwesthardwoods.com>; Jena Hackett <Jena.Hackett@ipaper.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jenny Dresler <jenny@pacounsel.org>; Jim Duke <jduke@idahoan.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; Joe Burrell <Joseph.g.burrell@jci.com>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell.com>; Josh D. Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Justin Pino <jpino@uetllc.com>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Kelly Francone <kfrancone@energystrat.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Kyle Williams <williamsk@byui.edu>; Larry Voos <larry.voos@norpacpaper.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Leslie Adams <adamsla@airproducts.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Martha Cox <Martha_C@columbiasteel.com>; Marty Sedler <marty.sedler@intel.com>; Mary Catherine McAleer <marycatherine.mcaleer@weyerhaeuser.com>; Mary McCordic <mary.mccordic@shell.com>; Matt Bryan <matt.bryan@intel.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <Matt.Upmeyer@lambweston.com>; Melissa Gomboskey <[redacted]; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <mkuhn@westrock.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Nancy Richardson <Nancy.richardson@bp.com>; Nick Avenetti <nick@perlite.com>; Nick Kaiser <nick.kaiser@lvpnp.com>; Noel Mak <Noel.Mak@atimetals.com>; Ortiz, Patrick W <patrick.ortiz@westrock.com>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <plydon@lhs.org>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Schultz <randy.schultz@bp.com>; Richard Greenwell <rgreenwell@uetllc.com>; Richard White <richard.a.white7@boeing.com>; Rick Harper <[redacted]; Rick Kunz <rick.kunz@shell.com>; Rick Stricker <rstricker@baf.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Robert Pierce <Robert.pierce@shell.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Rusty Williams <williwk@bp.com>; Ryan Beaver <Ryan.beaver@weyerhaeuser.com>; Sam Liebelt <samuel.liebelt@westrock.com>; Sam Merrick <merricks@byui.edu>; Samantha Julian <Samanthaj@pacounsel.org>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <SRHawley@marathonpetroleum.com>; Sharon Andersen <Sharon.w.anderson@intel.com>; Skyler Mlasko <Skyler.Mlasko@northwesthardwoods.com>; Spiro Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steve O'Brien <sobrien@baf.com>; Steven Castracane <steven.castracane@linde.com>; Teresa Acosta <teresa.acosta@calpinesolutions.com>; Tim Boyd <[redacted]t>; Tim Root <Timothy.Root@axiall.com>; Todd Wiseman <todd.wiseman@solvay.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tom Yarborough <tom@richlandpaper.com>; Tommy Brooks <tbrooks@cablehuston.com>; Tony Hardenbrook; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; Willaim McSherry <william.mcsherry@boeing.com>; Phil Foss <phil.foss@onsemi.com>

Subject: AWEC Washington Legislative Update

Attachments: AWEC Weekly 012019.docx

AWEC members,

Please see the attached weekly legislative update from our Washington lobbyist, Tim Boyd.

Regards,

John

--

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell:
Website: http://www.awec.solutions
E-mail: jcarr@awec.solutions

CONFIDENTIAL – PLEASE DO NOT DISTRIBUTE

AWEC ANNUAL MEMBER MEETING MINUTES
November 13, 2018, 2018

Seattle Hilton Airport Hotel
Seattle, WA

In attendance: See attached sign-up sheet

Handouts:
Agenda
Avista Update
BPA Update
Generic Proceedings Update (OPUC, WUTC)
PacifiCorp Update
PGE Update
PSE Update
Natural Gas Update
Oregon Legislative Update
Washington Legislative Update

Call to order and Anti-Trust Statement

1. John Carr opened the meeting at 9:00 am and reviewed the AWEC anti-trust statement.

Administrative:

John welcomed the group and those participating by phone to the annual meeting of the Alliance of Western Energy Consumers. John noted that after the luncheon, Elliot Mainzer, Bonneville Power Administration's CEO, would be the guest speaker.

Attendees introduced themselves.

1. John reviewed the schedule for upcoming 2019 meetings:
    - March 6, 2019, AWEC Member Meeting, Portland Sheraton Airport Hotel, Keynote speaker - TBD
    - June 5 AWEC Gas Member Meeting
    - June 5/6, AWEC Joint Electricity/Gas Conference with NWGA – Skamania Lodge
    - June 7, AWEC Electric Member Meeting – Skamania Lodge, Keynote speaker – TBD
    - September – Written updates to membership
    - November 12, AWEC Annual Member Meeting, Seattle Keynote speaker – TBD

2. **Financial Update**

   John provided an update on the organization's 2018 financials. He announced that the finances are in good shape and that he and AWEC staff have been consolidating the gas costs and revenues for the AWEC budget, as well as working on the 2019 budget to go to the Board of Directors in early December. He added that, as expected, due to the efficiencies of the merger, there will be no assessment increase for members in 2019.

3. **Organizational Update**

   John provided an update on the merger of NWIGU with ICNU as of April 1st with a name change to the Alliance of Western Energy Consumers (AWEC). He indicated that there has been some challenge with the name change at the Internal Revenue Service, as well as the difference in the financial years used as ICNU has used a calendar year and NWIGU used the fiscal year. In 2019 all members will be on a calendar year for invoicing.

   In regard to the merged group, John indicated that at the Board meeting held on November 12th the Board agreed that the member design of separate electric and natural gas groups was challenging when circumstances like the Sumas natural gas pipeline rupture occurred and it benefitted all members to have the information as it was updated. Thus, the Board voted unanimously to eliminate separate "gas" only or "electric" only members and to consider all members as simply AWEC members.

   John also announced that the Board approved the joining of the University of Oregon as a new member, effective immediately.

Legislative: ***(Please see handouts for the following issues)***

1. **Washington:** Tim Boyd provided an overview of the ongoing issues in Washington.

   Elections: At the time of the meeting (November 13) four vote counts were complete in most of the state's 39 counties. Tim noted that with 240,000 ballots still ready to be processed and more mailed ballots coming in each day, the final results won't be certified for several weeks.

   In the State Senate, Tim indicated that the Democrats have gained two seats, with two other races too close to call**. It will push their "working majority" to at least 27-22 and possibly 29-20.** In the State House, the Democrats have captured an additional six seats adding to their current slim majority of 50-48, and will possibly pick up two more. With some races to still be determined, Tim said that it could have been worse for Republicans and much better for Democrats.

   Carbon Issues: Initiative 1631 was soundly defeated by Washington voters at 56.49% statewide. I-1631 passed in only three counties: King, Jefferson and San Juan. Despite this win, as well as various Senate and House measures failing to advance last session, Tim indicated that energy/carbon bills will be pushed again in 2019. The message from the Governor's office and key legislators is that some kind of carbon pricing – most likely a cap-and-trade program — will be introduced. Some sectors are worse off under cap-and-trade as opposed to a carbon tax, while others are better off, he added.

   It appears BP America and the other oil companies want to find an acceptable solution and avoid another expensive fight, but it's not yet clear what an acceptable compromise

might look like. Tim said that he expects to see a carbon package introduced by mid-December when the Governor is required to release his draft budget. Tim said he would not be surprised to see a return to a cap-and-trade program in order to align with California and Oregon in the original vision created by the Western Climate Initiative. Tim said it's likely we may see a cap-and-trade bill coming out of the Governor's office.

Tim added that AWEC must continue to be proactive to protect electricity and gas members. Exemptions for energy-intensive, trade exposed sectors were a key issue in the I-1631 battle and will most likely be debated again in 2019.

With California having adopted a mandate for carbon-free electricity by 2045, the push for a 100% clean energy law in Washington, which was introduced in this last session, will have more momentum as well, Tim said.

Regulatory: Tim explained that he and Tyler Pepple from Davison Van Cleve have been working with the Washington Utility and Transportation Commission (WUTC) attorney and staff on agency-request legislation impacting ratemaking. He said he feels the WUTC is seeking common ground, but AWEC has not yet been able to resolve its concerns.

2. **Oregon:** JL Wilson from PAC Counsel discussed the Oregon legislative issues in 2018.

Legislative Session. JL indicated that AWEC had a number of political victories in 2018. The cap-and-trade legislation was defeated, although a new joint committee was announced after the session to look at carbon issues and design a proposed cap-and-trade proposal for 2019.

Elections. JL noted that the elections did not provide a more business-friendly balance of legislators. Kate Brown was re-elected as Governor, with the Democrats now having "supermajorities" in both the House and the Senate. The passage of Portland Measure 26-201 will force certain businesses to pay a new fee that the city will use to invest in cleaner energy and energy efficiency efforts for low-income Portland residents. It also places a 1% surcharge on business license taxes paid by retailers who have sales of more than $500,000 in the city and more than a $1 billion nationwide. JL said that the measure is the first major local attempt to put a price on carbon in Oregon. The environmental groups were successful in passing a gross receipts tax on large retailers to pay for environmental programs.

Carbon Issues. JL said that cap-and-trade will be the major threat that AWEC members face in 2019. However, with the corporate tax that passed the state will propose to make the cap-and-trade costs as cheap as possible. The Governor's office has indicated that there are approximately 30 manufacturing facilities that produce more than 25,000 metric tons of carbon. JL indicated that they are waiting to see the release of a draft bill for 2019.

The Joint Committee on Carbon is co-chaired by the Senate President and the House Speaker. JL explained that five meetings have been held during the Interim Session. The hearings are focused on Oregon's greenhouse gas emissions, carbon sequestration, forestry, and agriculture impacts. The impact on utilities and traded-sector industries is also being discussed.

The Governor's staff has announced that 84% of the inventoried emissions will be covered by the cap-and-trade proposal, with transportation leading the way at 38%,

electricity at 31%, natural gas at 9%, and industrial at 6%. JL added that there will be a big rush to attain allowances and exemptions by utilities and industrial customers, respectively.

Regulatory: ***(Please see handouts)***

Tyler Pepple and Josh Weber (Davison Van Cleve) provided a summary on current regulatory issues.

BPA

Josh provided an overview of the BPA issues.

1. **TC-20.** Josh noted that the Bonneville Power Administration (BPA) and transmission customers have reached a tentative settlement of the TC-20 terms and conditions case. BPA proposed a range of significant changes to its Transmission Tariff. The changes are generally positive, he said, as they will help the BPA modernize its infrastructure, move it to a standard, pro-forma tariff, and hopefully help it become more competitive on prices.

   AWEC has been participating in the process by focusing on dispatchable energy resource balancing services (DERBS) and other rate issues. BPA informed parties that it will propose transmission rate increases of between 7% and 10% when it files the BP-20 rate case. Because BPA had initially been unsuccessful in settling TC-20 with parties, it has offered to settle its transmission rates for the BP-20 rate period. BPA's proposal would establish increases of 4.2% for point-to-point and 2.5% for network transmission during the 2020 rate period, and would reduce the DERBS rate from $20.42 to $15.11 per MW. Josh said this would result in cost savings that would be more difficult to achieve if the transmission rates are litigated in the upcoming BP-20 proceeding.

2. **BP-20.** The BP-20 case has not yet been filed, Josh indicated, although it will be filed soon. The majority of BPA customers are power customers. With the power contracts expiring in 2028, Josh stated that parties want to slow the rate trajectory or turn them back. In order for TC-20 to be settled all parties must sign on; AWEC can't sign a settlement on its own. However, companies that are served by BPA direct transmission can sign on by themselves. Right now AWEC is being asked to settle transmission rates of the BPA-20 case or announce what our concerns are. On the BPA's previous estimate of a 4% to 5 % increase is mostly driven by its continuation and acceleration of its financial reserves policy. Josh said that BPA contends that it has achieved significant cost savings, including targeted Fish and Wildlife reductions that have prevented additional rate increase proposals.

   BPA released its final records of decision in September, which govern its financial reserves and leverage policies. Josh indicated that these policies will be implemented through rates in the BP-20 case. The leverage policy is intended to gradually reduce BPA's debt-to-asset ratio from 90% to a level between 70% and 80%. AWEC has been generally supportive of the efforts to have debt payments or increased non-debt capital financing to offset any increased borrowing because they help modernize the operations of BPA and can replace outdated repayment methodologies that have consistently led to overpayments by customers.

- **Financial Reserves.** Josh explained that the financial reserves policy (FRP) is likely to disproportionately affect power customers. The FRP was adopted in BPA's last rate case, but its full implementation has been delayed due to rate impacts. The FRP is designed to help BPA sustain its financial stability and it sets a goal of both the power and transmission business lines to hold 60 days worth of cash on hand. BPA intends to collect $30 million per year from power customers in the BP-20 rate period and $40 million in the BP-22 rate period and beyond. Josh indicated that these charges will continue until BPA meets its 60-day target of cash on hand for power, which is about $300 million.

  BPA's quarterly business report shows that the agenda is projected to finish the year with $840 million cash on hand, which is up from the $638 million projected in BP-18. In the upcoming rate case Josh said that AWEC will examine the drivers of the positive results, which supports AWEC's belief that BPA doesn't need a 4% to 5% rate increase to maintain its financial performance.

  Bruce Wittmann (Weyerhaeuser) said that some utilities served by BPA are talking to their customers regarding their contracts that expire in 2028. If the agency doesn't get to a competitive rate is it likely BPA will start asking for commitments from customers to remain on the system?

  Josh said that no utilities have voiced that they are leaving BPA. The smaller utilities will just pass any increases onto their customers. Large commercial and industrial groups, on the other hand, are thinking about their future contracts.

3. **Energy Imbalance Market**. Josh also noted that BPA is examining joining the Energy Imbalance Market. There are challenges to the agency joining.

PGE Issues

Tyler Pepple provided an overview of the PGE issues.

1. **PGE Rate Case.** Tyler discussed the results of the PGE general rate case filed on February 15, 2018. The filing requested an overall $86 million, or 4.8%, increase. With revenue requirement issues fully resolved, Tyler said that through stipulations and the use of an updated power cost forecast the increase has been reduced down to 1%. Customers on Schedules 89 and 90 will receive rate decreases for the second year in a row of approximately 1%. Direct access customers will also see a decrease in their delivery charges.

   The utility has also agreed to pass back savings from the federal tax reduction that will amount to $45 million over two years, for a total rate reduction impact of 2.5% in 2019.

2. **Renewable Request For Proposals.** PGE filed an RFP in October seeking approximately 100 aMW of new renewable resources. Three projects have made it onto PGE's shortlist, Tyler said. AWEC filed comments opposing PGE's request for acknowledgement. While the utility argued that the RFP is justified because of the opportunity to get Production Tax Credits before they expire, Tyler noted that the RFP scoring shows that the risks of these resources outweigh the benefits. PGE filed response comments in early November and though they made some changes to its preferred procurement portfolio, the utility stuck with its argument that customers will benefit in the future. The request will be considered before the Oregon Public Utilities Commission (OPUC) on December 4, 2018, Tyler indicated.

3. **Green Tariffs.** On April 13, 2018, PGE filed a proposal for a "green tariff" option for large energy users. Tyler explained that the green tariff allows industrials to buy renewable energy directly. Subscribers would remain on their cost-of-service tariff, but would also be charged a separate rider to cover the cost of a new renewable resource.

   Although parties were close to settling all issues, OPUC staff proposed an amendment that would stop a participating customer from ever paying an amount for the green tariff resource that would result in the customer paying less than its cost of service. AWEC and other parties opposed this provision because it would require the participating customer to assume all the risk without ever receiving any potential rate benefits from the resource. A procedural schedule was reinstated and parties filed testimony on October 22^{nd}.

Puget Sound Energy Issues

1. **Expedited Rate Filing.** Tyler indicated that PSE filed a new expedited rate file (ERF) on November 7, 2018. The utility originally filed such a case in June 2018, but they withdrew it after staff indicated they would oppose it on the grounds that PSE was earning its authorized return. Parties agreed to allow PSE to file one ERF as part of the settlement of its 2017 general rate case.

   The new ERF requests an overall increase of $18.9 million for the electric customers and $21.7 million for gas customers. PSE proposes a **0.71% increase** for Schedules 46 and 49, with Schedule 449 receiving a 0.06% increase. Schedule 40 customers would receive a 0.6% increase, Tyler said, but with the distribution charges individually assigned to those customers the rate impacts may differ slightly.

   On the gas side, PSE proposes to spread the rate increase based on equal percent of margin, so all customer classes are proposed to have a 2.9% increase. PGE contends that this allocation is also consistent with the 2017 rate case settlement, although Tyler said the settlement appears to be ambiguous on this point because the gas rate spread issues were not settled in the last rate case. The Washington Utilities and Transportation Commission (WUTC) did adopt an equal percent of margin, however. Tyler noted that PSE has requested that the WUTC review the filing in 120 days and AWEC will fully participate in the case.

2. **Sale of Macquarie Interest.** Tyler addressed the attempt to sell by PSE's majority shareholder (Macquarie) its 44% share of the company to a consortium of pension funds. PSE filed for approval of this sale to the WUTC on September 5, 2018. Parties were caught of guard and would like to look at the filing so that it is not merely rubberstamped by the Commission.

   AWEC and other parties filed a joint petition for the Commission to open an adjudication to review the potential benefits that would be due to the PSE customers. At an open meeting on November 5^{th}, the WUTC opened an abbreviated adjudication that will take about four months. Tyler added that the Commission rejected the joint petitioners' argument, saying that controlling interest means transfers of at least 50% of ownership.

Generic Proceedings

Oregon

1. **Investigation into Legal Authority to Defer Capital Costs.** Tyler discussed the final order issued by the OPUC on October 29, 2018, resolving the question of whether it has the legal authority to authorize deferrals of the return on capital investments. The docket had been opened because Commission staff believed that the OPUC did not have that authority and requested a proceeding to resolve the issue. AWEC filed jointly with the Citizens' Utility Board supporting the staff's position, while the utilities joined together in opposition. The OPUC's order rejected all the arguments and determined that it lacks the authority not only to defer the return on capital investment, but also the return of investments like depreciation expense.

   Tyler noted that AWEC will follow a number of issues that have been identified, e.g., PGE's outstanding deferral of approximately $25 million for a portion of the capital costs of its new billing system. Tyler said that the utilities have until December 28th to either seek reconsideration or judicial review. The utilities could also pursue a legislative fix.

2. **Renewable Portfolio Standard Rulemaking.** The OPUC has issued a rulemaking to review its renewable portfolio standard (RPS) rules after Oregon's 50% RPS law, under SB 1547. AWEC is participating to monitor the changes and to achieve a more accurate accounting of the incremental costs of RPS compliance.

   Under the current compliance methodology, Tyler noted that if a utility exceeds the 4% cost cap in place to protect customers from increased rates, the utility does not need to comply with the RPS requirements. AWEC wants to change the rules in place so that the 4% cost cap does what it is intended to do – protect customers from paying incremental costs for RPS compliance. The process is in an informal rulemaking phase.

Washington

1. **Rulemaking on the Integrated Resource Plan.** The WUTC is considering adopting a rulemaking regarding Washington's IRP planning. Staff and utility proposals have discussed the creation of a competitive bidding process similar to Oregon's, Tyler said. AWEC, however, has opposed developing a complex system like Oregon's, which rarely delivers any value for customers and simply ends up being an expensive cost passed onto ratepayers. Instead, Tyler stated that AWEC has provided detailed comments to protect customers to the maximum extent possible in case the WUTC chooses to adopt a new competitive bidding proposal.

   AWEC's recommendations focus on ensuring that competitive bidding approval doesn't become just another way to shift risk to ratepayers. AWEC is also opposed to requiring the utilities to competitively bid a portion of their conservation requirements, Tyler explained, because there is no basis that the requirement would lead to additional conservation procurements.

PacifiCorp

Oregon

1. **Cost Allocation**

   a. **Oregon –Specific Investigation**

The OPUC opened Docket No. UM 1824 to look at Oregon's specific cost allocation outside of PacifiCorp's Multi-State Process (MSP). AWEC has provided background information, Tyler said, and very little has happened in this docket in 2018. The staff continues to state that they are working on a proposal, but Tyler believes that nothing of substance will come out of this proceeding.

   b. **Multi-State Process**

Tyler provided an update on the PacifiCorp MSP. The meetings continue, Tyler noted, and parties continue to question PacifiCorp's CLEAR plan, concerned about taking on the risk that would be part of a near-term alignment of all of the utilities' thermal plants to individual states under a "subscription plan", Tyler explained.

Both Utah and Wyoming have offered counter-proposals to the parties that advocate for a phased-in approach to the CLEAR plan. PacifiCorp is not receptive of the proposal, but there is some momentum building behind it among the eastern states. Tyler added that such momentum makes acceptance of PacifiCorp's option less likely by the six states. The Oregon parties, including AWEC, are meeting to discuss a coordinated position on November 30th. All of the PacifiCorp states will participate in meetings scheduled in Portland on December 5th and 6th.

2. **Transmission Adjustment Mechanism (TAM).** Tyler indicated that on October 26, 2018, the OPUC entered its order approving the Partial Stipulation submitted during the summer. The Stipulation provides PacifiCorp's Oregon-allocated net power costs will have a baseline of $366.3 million, subject to final numbers from PacifiCorp in November, which showed a $5.1 million decrease from the stipulated amount. Unless there are any final updates, Tyler noted that customers will see a $3.8 million decrease in power costs next year (0.3%).

   Regarding the EIM, Tyler said that the order declined AWEC's opposition to including EIM costs in the TAM. The OPUC said the costs should be allowed because they make up a small component of the Company's overall costs.

3. **Depreciation Study.** PacifiCorp filed an application to revise depreciation rates in its six states on September 13, 2018. Tyler noted that the study proposes a system-wide increase of 0.9% to the current 3.11% depreciation rate for PacifiCorp's electric utility plant, resulting in a new depreciation rate of 4.02%.

   Tyler identified three reasons for the increase:

   1. Increased steam plant depreciation expense;
   2. PacifiCorp's goal to shorten the terminal lives of several coal-fired plants; and
   3. Repowering the utility's wind generation facilities in 2019 and 2020.

   The resulting depreciation rates, if approved, would increase customer rates by $67 million in Oregon and $38 million in Washington, Tyler said. The OPUC held a pre-

hearing conference and established a schedule in late October. The WUTC has not yet established a schedule, but Tyler said he hopes it will align with Oregon's. PacifiCorp cannot recover any of the expense until it files a rate case, which it proposes to do in 2020.

Washington

1. **Depreciation Study.** See comments above.

Avista.

1. **Avista/Hydro One Merger.** Tyler provided an update on the Avista/Hydro One merger. The WUTC extended the deadline for approving or rejecting the merger to December 15, 2018, after the Hydro One Board members and CEO were ousted by the new premier.

   The applicants and parties have met to discuss additional commitments that could be warranted given the management changes. After a few additional commitments, e.g., reduction of Hydro One's influence on the Avista board of directors, the parties have agreed to support the merger. Tyler said he believes it is likely the WUTC will approve the merger.

ANNUAL MEMBERS' MEETING

AWEC Executive Director John Carr called the Annual Members' meeting to order at 11:40 am and reminded members of the organization's anti-trust statement. He reminded members of the three-year staggered terms of Officers and members of the Board of Directors. John then handed the meeting over to AWEC President Don Sturtevant (JR Simplot).

Don explained the three-year terms that are served by Board members. Don discussed the successful merger of ICNU and NWIGU, as well as the integration of Board members. Three Board members were up for re-election:

Aldis Raisters (Georgia Pacific)

Matt Ruckwardt (Schnitzer Steel)

Michael Padgett (Alcoa)

Don asked for a motion and a second and all three Board members were unanimously approved for an additional three-year term. John noted that Matt will continue as Board Co-Chair and Michael as Treasurer.

John adjourned the Annual Member's meeting at 11:50 am, re-opened the Members Meeting, and called for a lunch break.

Keynote Speaker

John re-opened the meeting at 12:30. He welcomed guest speaker, Elliot Mainzer, Administrator and CEO for BPA. Attendees introduced themselves in the room and on the telephone.

Elliott discussed BPA's strategic plan "back to the basics" following the four core principles:

1. Finances
2. Core asset management: including transmission and plants, updating the federal grid that is behind on upgrades, modernizing the grid for automation and new markets

3. Competitive power prices in order to compete with the Mid-C and opening new markets on clean capacity.
4. Real constraints on transmission capacity have occurred with high tech data companies moving into the Northwest, putting upward pressure on rates

Elliott noted that since the 2008 contracts were signed that expire in 2028, the economics have changed dramatically. The BPA has been hurt on the revenue side with the continued reduction in natural gas prices, cheap California renewable energy, as well as load loss.

Elliott said that he expects that upward pressure of 3.5% to 4% on rates in 2021. The wholesale trading market is dysfunctional, he noted, with the Sumas pipeline rupture. Prices jumped up when the break occurred, he said, and could have been worse if cold weather had set in.

There is a cavalier attitude about capacity, he said, with war on coal and now a war on natural gas. There are bills to have entire states served only by renewable energy without a true understanding of the economics of it, as well as the flexibility and adequacy that are required. The BPA recently developed a five-year capacity deal with Oregon that provides carbon-free energy to the state, while providing more stability and capacity for BPA. Elliott indicated that he would like the BPA to become a “dispatch service” in regard to flexibility and capacity.

Elliott discussed the Columbia River Treaty, which is an important issue for the BPA. The total storage of the rivers occurs in Canada, he said. The Treaty discussions have stalled for four years. Currently, there are substantive discussions going on with the affected Tribes and the Treaty will have a big impact on the long-term power supply in the Northwest.

The price spread between Mid-C and the BPA is significant. Elliott said that the agency is focused on cost and revenues and hoping to get costs to zero-level in the 2021 power case and going forward. Those are big challenges, he indicated, with 600 fish projects that cost $300 million annually. BPA has removed $30 million out of the projects and it was very difficult to get consensus on that. A pragmatic system is needed to handle the river.

John noted that there are two split opinions on the Treaty, which undermines using the river in a useful way. Elliott agreed and added that they need trust, strategizing and sacrifice from all parties.

Bruce Wittmann (Weyerhaeuser NR) asked about the cost structure concerns. How does the BPA see costs once we get to 2028 and the contracts have expired? If the BPA waits too long to make enough changes to align power prices, what are the risks? Elliot said that he is pretty confident that the agency will be able to get the cost structure in place and moving forward to make the necessary changes to be competitive.

Teresa Acosta (Calpine Solutions) asked how the BPA views “preference” customers. Elliot explained that the preference customers are the most critical customers on the system and they are trying to keep embedded costs in place.

Jim Stanton (Microsoft) asked how the financial reserves worked for transmission and power. Elliot indicated that the transmission reserves have been building up to cover 240 days with cash reserves in place. The power side has struggled with that and so it has not reached that yet. He would like to have 60 days of cash reserve for power and BPA has put $100 million unto revenue financing and is trying to use the reserves efficiently.

John thanked Eliot and closed the meeting at 1:25 PM.

AFTERNOON MEETING

Natural Gas Director Ed Finklea opened that afternoon natural gas section of the meeting at 1:30 PM.

1. **Enbridge Pipeline Disruption.** Ed introduced Rick Rautenbach from Enbridge and Gary Venz from Williams and Northwest Pipeline.

   Rick discussed the October 9th Westcoast Pipeline rupture on the 36-inch pipe where gas supplies to the Northwest were interrupted. The rupture occurred at 5:25 PM PDT at stations 4A and 4B, he indicated. Enbridge owns two pipelines in that area at 30 and 36-inch diameters. Rick noted that the pipelines share the same Right-of-Way and it took 36 hours to make sure the 30-inch pipeline was safe to operate. Industries require 600 to 750 MBcd/day, he said, and the repair on the 36-inch line was completed by October 31st. The repair also had to be inspected and so it took longer to get the supply back online.

   Rick noted that the rupture had a big impact in the region and that the other pipeline was currently being worked on to expand the natural gas supply. Enbridge bypassed the rupture by using the 30- inch line, and then flowing both lines after the bypass.

   Regarding engineering assessments, Rick said that they expect to be back to full pressure by November 30th. However, they will be working on other segments of the 36-inch pipeline and some sections are more complex than others.

   Drew Bryck (Boeing) asked when the 36-inch pipeline will be back to full capacity. Rick said that currently there is an 80% pressure restriction in place. On November 13th the pipeline was at 900 Mcf, which is 55-60% capacity, and he expects it to be back to 80% by November 30th. Rick added that the cause of the rupture is being investigated by the Canadian Transportation Board and that could take as long as a year for the full report.

   David Barge (Tesoro Refining) asked if there will be issues during the winter regarding construction. Rick said that between mid November and November 30th there will be fluctuations on the line and gas availability. Both pipelines are run at the same pressure although one is six inches larger in diameter.

   (Phone question) Has a rupture of this scale happened like this before in the US and Canada? Rick said it’s very uncommon.

   Gary Venz provided additional information on the rupture and the impact on natural gas transportation customers. Northwest Pipeline provides the primary natural gas source to local utilities, power plants and industrial facilities. He added that Northwest is bi-directional and enables customers to transport gas entering from Canadian or domestic supply sources, with gas entering the market area at Sumas Receipt or through the Roosevelt Compressor. Sumas can receive up to 1.3Bcf/d of Canadian production from Westcoast Pipeline at the Canadian Border.

   Gary said that when the rupture occurred on October 9th Northwest customers were delivering at an average rate of 1.28 Bcf of gas into the Market Area and had scheduled an additional 1.21 Bcf for October 10th. Planned maintenance was also occurring on Northwest Pipeline prior to the winter season, he noted. Deliveries at Sumas immediately began to fall and by 9 am on October 10th, and Northwest was receiving zero of the 959,460 dekatherms that customers were expecting from Sumas.

Gary explained the emergency services that went into play a few hours after the rupture. Natural gas and power participants discussed the issue on the phone and major power, industrial and Local Distribution Companies began shedding load immediately. Northwest issued an "overrun entitlement" for the October 10th gas day at 5%, and 3% thereafter. Gary said that Northwest worked at an accelerated pace to restore full operational services at the Roosevelt compressor station. Puget Sound Energy (PSE) and Northwest expedited Jackson Prairies' return to service.

David asked if Jackson Prairie was bidirectional. Gary said it was not. Sam Liebelt (Kapstone) asked if there will be enough gas available for the winter. Ed responded that a winter of "entitlements" is coming and penalties are being passed along. The PSE tariff jumped to $100 and AWEC will need to go before the WUTC if PSE is not cooperative on backing down the penalties. Ed noted that there will be a session on December 4th in Oregon before the OPUC and an earlier one in November before the WUTC.

Washington ***(Please see handouts for the following issues)***

1. **PSE Tariff Issue with Curtailments and Entitlements.** Tommy Brooks from Cable Huston discussed the PSE tariff issues. He noted that due to the rupture on the Enbridge Pipeline, Northwest Pipeline has issued several critical notices, which in some cases have required immediate action from customers. PSE has passed entitlements to its customers and PSE's tariffs allow that during an overrun entitlement, volumes of gas delivered in excess of 103% will be billed based on rules in the tariff. Rule 23 provides that the penalty for unauthorized gas usage during a curtailment is $5/therm for the first two hours and after that the penalty is $10/therm.

   Tommy added that AWEC believes that PSE's penalties are excessive and will provide a windfall to the utility. AWEC is working with PSE to address this issue.

2. **Cascade Rate Case.** Cascade filed a general rate case in August 2017 for an overall natural gas service increase of 2.71%. Tommy indicated that NWIGU filed testimony arguing on tax income credit from the Tax Cuts and Jobs Act (Tax Act) and that the Cascade cost of service (COS) study was flawed.

   A partial settlement was achieved that would increase the utility's annual revenues by $750,000 before considering the tax impact, which then reduces the revenue requirement by $2.9 million, or a 1.4% decrease. However, Tommy noted that because parties could not agree on the calculation and treatment of the Tax Act impact on rates, a hearing was held and the WUTC agreed with AWEC, staff and Public Counsel and ordered Cascade to return an additional $1.6 million to ratepayers, for a total rate decrease of $4.5 million.

2. **Generic COS Docket.** In the generic COS docket, Tommy explained that the WUTC directed its staff to convene utilities and stakeholders to determine if there is a more consistent, agreed-upon method to use. Tommy said that Avista, PSE and Cascade each use the Peak and Average Ratio methodology and AWEC believes this methodology relies too heavily on volumetric use and does not allocate enough costs as demand-related expenditures. This method is especially harmful to large volume gas users. AWEC has provided comments to the WUTC on staff's approach and will participate in the December 3rd technical workshop.

Oregon

1. **NW Natural Gas Case.** Tommy provided an update on the gas rate case in which the utility sought a 15% margin increase of $52.4 million. NW Natural showed in its incremental cost study that industrial classes of customers were paying above their COS, while other classes were paying below their COS. In spite of that, Tommy indicated that NW Natural still proposed to spread its increase on an equal percentage basis. AWEC submitted testimony on rate spread and rate design illustrating that large gas users and transportation customers are subsidizing other classes. AWEC also filed testimony on ROE, revenue requirement, cost sharing, pension issues, and rate spread.

   Tommy noted that a number of issues were settled allowing for an Oregon-allotted increase to revenues of $16 million, down significantly from the requested $52.4 million. This increase would have resulted in a 4.5% increase spread evenly across customers. NW Natural, staff and CUB entered into a second settlement that AWEC objected to for several reasons. The WUTC sided with AWEC and rejected the settlement and ordered a Phase II for the docket to address the pension balancing account and remaining Tax Act issues.

2. **Investigation to Defer Capital Costs.** Under this generic docket opened by the OPUC to investigate the scope of its authority to defer capital expenses or revenues, all utilities filed testimony, along with AWEC, CUB and staff.

3. **Cascade Rate Case.** Chad Stokes from Cable Huston addressed the Cascade Natural Gas case in Oregon, in which the utility sought a $2.3 million, or a 3.53% rate increase. AWEC and other parties settled on a 9.4% Return on Equity. AWEC filed testimony arguing that Cascade's rate spread and rate design proposal was unreasonable and that the revenue requirement was too high in relation to the impact of the Tax Act adjustments. Chad noted that AWEC also opposed the arbitrary move of interruptible customers to firm service because the company claimed those customers had not been interrupted. Parties settled most issues, including a $1.175 million rate increase.

   Chad added that Cascade withdrew its request to move interruptible customers to firm service, as well as removing the safety tracker proposal. Parties will address the Interim period tax savings from the Tax Act, which Chad believes will further reduce rates between $500,000 and $1 million.

Idaho

1. **Intermountain Safety Tracker.** The Intermountain Gas Company filed an application earlier in 2018 to implement an infrastructure integrity management mechanism to allow the company to accelerate the replacement of aging infrastructure and mitigate the increasing impact of regulation on the company's capital and Operations and Maintenance budgets. Chad explained that AWEC said in its comments that such a tracker would be single-item ratemaking without looking at any factors that would offset the need to pay for a rate increase. The Idaho Commission sided with AWEC, who was supported by Commission staff, and denied the application.

2. **Intermountain Tax Act Proceeding.** Chad addressed the application filed by Intermountain addressing the impact of the Tax Act on its federal tax income. AWEC intervened and worked to settle with the other parties for a $5.1 million revenue requirement adjustment (5.6%), which will be returned to customers on an equal percentage basis in reduced rates.

Oregon/Washington

1. **Hydro One Avista Merger.** Chad addressed AWEC's participation in the merger in regard to protecting Avista customers. Hydro One made it clear that the company was not interested in the Avista gas operations so AWEC required that one condition of the merger would be that the company would not sell Avista's gas business for three years.

Federal Issues

1. **Gas Transmission Northwest Tax Act Update.** Chad provided an update on the federal pipeline impact due to the Tax Act. *Please see handout.*
2. **Northwest Pipeline Tax Act Update.** Chad provided an update on the federal pipeline impact due to the Tax Act. *Please see handout.*

John adjourned the meeting at 3:00 PM.

From: John Carr <jcarr@awec.solutions>

Sent time: 01/22/2019 01:49:00 PM

To: Aldis Raisters <Aldis.Raisters@gapac.com>; Alex Koleber; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamaee <bmcnamee@timberproducts.com>; Beth Beatty <beth@cmsnaturalgas.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Bill Gillmore <billmg@penwool.com>; Bill Smith <Bill.Smith@airliquide.com>; Boz Van Houten <vanhoutb@ohsu.edu>; Brad Beavers <bbeavers@timberproducts.com>; Brad Van Cleve <bvc@dvclaw.com>; Brian Wood <brian.wood@nippondynawave.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <[redacted]>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Chad Sorber <sorber@ohsu.edu>; Chad Stokes <cstokes@cablehuston.com>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <Chris_h@columbiasteel.com>; Chris Ingram <chris.ingram@recsilicon.com>; Chuck Gates <[redacted]; Clay Riding <clayr@nw-iw.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Courtney Smith <courtney.smith@shell.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leone <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Daniel Riley <daniel.t.riley@tsocorp.com>; Daryll Fuentes <dfuentes@usg.com>; Dave Post <Dave.Post@wahchang.com>; David A Barge <DABarge@marathonpetroleum.com>; David Clemens <david.clemens@darigold com>; David Elliot <davidelliott@boisebuilding.com>; David Hawk <[redacted]>; David Jones <david.jones@swansongroup.biz>; David Mitcheltree <DBM@eesconsulting.com>; David Tobin <DavidTobin@boisepaper.com>; Dean Gallinger <dean.m.gallinger@boeing.com>; Delee Shoemaker <delees@microsoft.com>; Desiree Higgins; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <don.sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Betzold <CMS@cmsnaturalgas.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <Drew.Gilpin@evrazna.com>; Ed Coghlan <Ed.coghlan@onsemi.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@pccstructurals.com>; Eric Streicher <Eric.Streicher@airgas.com>; Fawn Barrie <fbarrie@legadv.com>; Gary Collison <gcollison@pccstructurals.com>; Gary Londo <gary.j.londo@boeing.com>; Hugh Pierce <Hugh.O.Pierce@tsocorp.com>; Irene Plenefisch <irenep@microsoft.com>; Jake Evans <Jake.evans@onsemi.com>; James Clarken <James_Clarken@oxy.com>; James Price <JaDPrice@gapac.com>; Janese Pierson <Janese.Pierson@ipaper.com>; Jared Sommer <sommerj@byui.edu>; Jasmin Simmons <JAMIN.SIMMONS@resolutefp.com>; Jason Hakes <jason.c.hakes@intel.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jeff Steed <jeff.steed@northwesthardwoods.com>; Jena Hackett <Jena.Hackett@ipaper.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jenny Dresler <jenny@pacounsel.org>; Jim Duke <jduke@idahoan.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; Joe Burrell <Joseph.g.burrell@jci.com>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell.com>; Josh D. Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Justin Pino <jpino@uetllc.com>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Kelly Francone <kfrancone@energystrat.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Kyle Williams <williamsk@byui.edu>; Larry Voos <larry.voos@norpacpaper.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Leslie Adams <adamsla@airproducts.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Martha Cox <Martha_C@columbiasteel.com>; Marty Sedler <marty.sedler@intel.com>; Mary Catherine McAleer <marycatherine.mcaleer@weyerhaeuser.com>; Mary McCordic <mary.mccordic@shell.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <Matt.Upmeyer@lambweston.com>; Melissa Gomboskey <[redacted]; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <mkuhn@westrock.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Nancy Richardson <Nancy.richardson@bp.com>; Nick Avenetti <nick@perlite.com>; Nick Kaiser <nick.kaiser@lvpnp.com>; Noel Mak <Noel.Mak@atimetals.com>; Ortiz, Patrick W <patrick.ortiz@westrock.com>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <plydon@lhs.org>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Schultz <randy.schultz@bp.com>; Richard Greenwell <rgreenwell@uetllc.com>; Richard White <richard.a.white7@boeing.com>; Rick Harper <[redacted]; Rick Kunz <rick.kunz@shell.com>; Rick Stricker <rstricker@baf.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Robert Pierce <Robert.pierce@shell.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Rusty Williams <williwk@bp.com>; Ryan Beaver <Ryan.beaver@weyerhaeuser.com>; Sam Liebelt <samuel.liebelt@westrock.com>; Sam Merrick <merricks@byui.edu>; Samantha Julian <Samanthaj@pacounsel.org>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <SRHawley@marathonpetroleum.com>; Sharon Andersen <Sharon.w.anderson@intel.com>; Skyler Mlasko <Skyler.Mlasko@northwesthardwoods.com>; Spiro Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steve O'Brien <sobrien@baf.com>; Steven Castracane <steven.castracane@linde.com>; Teresa Acosta <teresa.acosta@calpinesolutions.com>; Tim Boyd <[redacted]>; Tim Root <Timothy.Root@axiall.com>; Todd Wiseman <todd.wiseman@solvay.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tom Yarborough <tom@richlandpaper.com>; Tommy Brooks <tbrooks@cablehuston.com>; Tony Hardenbrook; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; Willaim McSherry <william.mcsherry@boeing.com>; Phil Foss <phil.foss@onsemi.com>

Subject: AWEC Oregon Legislative Update

Attachments: AWEC Oregon Legislative Update January 22 2019.docx

---

AWEC members,

Please find attached the Oregon weekly legislative update from our lobbyists at Pac Counsel.

Regards,

John

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell:
Website: http://www.awec.solutions
E-mail: jcarr@awec.solutions

AWEC members,

The 2019 Oregon Legislature kicked off the 2019 session. Today is Day 1!

We are working to analyze the 1,500 bills that have been introduced today – and committees began convening. It is widely anticipated that the Oregon legislature will tackle several major and controversial issues, including cap-and-trade. Other issues the legislature will push include tax reform and school funding. Taxes could include a gross receipts tax, a business activity tax, and changes to corporate tax rates. These tax hikes would be used to fund a new education funding package. The legislature will also tackle issues relating to affordable housing, kicker reform, and work to close a Medicaid budget hole that is estimated between $600-$900 million.

Weekly AWEC reports will focus on issues that could impact member's electric rates or natural gas rates.

Carbon taxes: Representatives of the Governor's office presented a carbon-price proposal to the Joint Committee on Carbon Reduction during Legislative Days. The model being discussed is a cap-and-trade system. Dozens of decisions remain that will determine the cost of this program and the impact it will have on businesses and AWEC members. We anticipate that there will be significant costs associated with passage of a program and we will work to mitigate the cost impacts. The question is really, which businesses, and how will they pay. If a cap-and-trade bill passes, higher fuel and energy costs are all but certain. We anticipate a final bill by the end of the month. A joint committee was created and will meet Monday evenings and Friday afternoons throughout session.

Other bills AWEC is tracking:

Alliance of Western Energy Consumers

HB 2242	Position	Priority
Bill Info	Oppose	1

Summary: Authorizes Public Utility Commission to consider differential energy burden and other inequities of affordability in rates. Authorizes public utilities to enter agreements to provide financial assistance for organizations to represent in regulatory proceedings before commission interests of low-income customers and customers that are members of environmental justice communities. Establishes Office of the Low-Income and Environmental Justice Advocate within commission. Authorizes office to intervene in certain proceedings. Directs commission to establish public process for investigating ways to address and mitigate differential energy burdens on classes of electric company customers and other inequities of affordability. Requires commission to report findings to interim

committees of Legislative Assembly related to energy and business no later than September 15, 2020. Sunsets public process January 2, 2021.

1/29/19	H - Public Hearing scheduled.
1/15/19	H - Referred to Energy and Environment with subsequent referral to Ways and Means.
1/14/19	H - First reading. Referred to Speaker's desk.

HB 5044	Position	Priority
Bill Info	Oppose	1

Summary: Appropriates moneys from General Fund to Oregon Climate Authority for biennial expenses. Limits biennial expenditures from fees, moneys or other revenues, including Miscellaneous Receipts, but excluding lottery funds and federal funds, collected or received by authority. Limits biennial expenditures by authority from certain lottery moneys. Limits biennial expenditures by authority from federal funds. Authorizes specified nonlimited expenditures. Declares emergency, effective July 1, 2019.

1/15/19	H - Referred to Ways and Means.
1/14/19	H - First reading. Referred to Speaker's desk.

SB 0089	Position	Priority
Bill Info	Oppose	1

Summary: Requires Environmental Quality Commission to adopt by rule program for assessing net impacts of state policies and programs for reducing greenhouse gas emissions. Declares emergency, effective on passage.

1/15/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0098	Position	Priority
Bill Info	Monitor	1

Summary: Requires Public Utility Commission to adopt by rule renewable natural gas program for natural gas utilities to recover prudently incurred qualified investments in meeting certain targets for including renewable natural gas in gas purchases for distribution to retail natural gas customers. Requires commission to adopt rules no later than December 31, 2019. Takes effect on 91st day following adjournment sine die.

1/17/19	S - Referred to Carbon Reduction.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0220	Position	Priority
Bill Info	Oppose	1

Summary: Requires Department of Environmental Quality to conduct study related to greenhouse gas emissions. Sunsets January 2, 2022.

1/15/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0598 **Position** **Priority**

Bill Info Oppose 1

Summary: Changes name of Oregon Global Warming Commission to Oregon Climate Change Commission. Requires commission to appoint executive director. Appropriates moneys to commission for purposes related to executive director of commission. Modifies certain duties of commission and of certain nonvoting members of commission. Modifies certain duties of certain agencies of state government with regard to duties of commission.

1/17/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

HB 2093 **Position** **Priority**

Bill Info Monitor 2

Summary: Permits Oregon Department of Administrative Services to contract with other entity, and to participate in, sponsor, conduct or administer cooperative procurements, for purpose of acquiring, installing, maintaining or operating devices or facilities to deliver electricity to public for electric motor vehicles. Specifies that solely for purpose of contracting agency's participating in, sponsoring, conducting or administering cooperative procurement, device or facility for delivering electricity to public for electric motor vehicles is not public improvement. Becomes operative on January 1, 2020. Takes effect on 91st day following adjournment sine die.

1/15/19	H - Referred to Rules.
1/14/19	H - First reading. Referred to Speaker's desk.

HB 2322 **Position** **Priority**

Bill Info Monitor 2

Summary: Requires Land Conservation and Development Commission to amend statewide land use planning goals related to energy to incorporate development of renewable energy facilities and reduction of greenhouse gas emissions and to match state energy policies.

1/18/19	H - Referred to Energy and Environment.
1/14/19	H - First reading. Referred to Speaker's desk.

HB 2329 | **Position** | **Priority**
Bill Info | Monitor | 2

Summary: Modifies definition of "energy facility" for purposes of regulation of energy facilities by Energy Facility Siting Council. Broadens provisions for types of electric power generating plants that may elect to obtain site certificate from council if otherwise not required to obtain site certificate.

1/18/19 H - Referred to Energy and Environment.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2494 | **Position** | **Priority**
Bill Info | Monitor | 2

Summary: Extends operation of public purpose charges until January 1, 2036.

1/18/19 H - Referred to Energy and Environment.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2611 | **Position** | **Priority**
Bill Info | Support | 2

Summary: Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.

1/18/19 H - Referred to Energy and Environment.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2618 | **Position** | **Priority**
Bill Info | Monitor | 2

Summary: Requires State Department of Energy to adopt by rule program for providing rebates for purchase, construction or installation of residential and commercial solar electric systems and paired solar and storage systems. Sets forth rebate limits under program. Establishes Rooftop Solar Incentive Fund. Continuously appropriates moneys in fund to department to issue rebates. Limits total amount of rebates issued annually for commercial systems. Appropriates moneys from General Fund to department for deposit in Rooftop Solar Incentive Fund. Requires department to submit annual report on program to Legislative Assembly. Sunsets January 2, 2024. Takes effect on 91st day following adjournment sine die.

1/15/19 H - Referred to Energy and Environment with subsequent referral to Ways and Means.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 5017 | **Position** | **Priority**
Bill Info | Monitor | 2

Summary: Appropriates moneys from General Fund to Department of Environmental Quality for certain biennial expenses. Limits biennial

expenditures from fees, moneys or other revenues, including Miscellaneous Receipts, specified bond proceeds and specified federal funds, but excluding lottery funds and other federal funds, collected or received by department. Limits biennial expenditures from lottery moneys allocated from Parks and Natural Resources Fund to department. Authorizes specified nonlimited expenditures. Limits certain biennial expenditures by department from federal funds. Declares emergency, effective July 1, 2019.

1/15/19 H - Referred to Ways and Means.

1/14/19 H - First reading. Referred to Speaker's desk.

SB 0038 **Position** **Priority**

Bill Info Support 2

Summary: Modifies provisions for treatment of renewable energy certificates issued for generation of thermal energy.

1/22/19 S - Public Hearing Scheduled.

1/15/19 S - Referred to Environment and Natural Resources.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0068 **Position** **Priority**

Bill Info No Position 2

Summary: Increases annual fee imposed on public utilities and telecommunications providers for purpose of defraying costs of Public Utility Commission. Declares emergency, effective on passage.

1/15/19 S - Referred to Business and General Government.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0091 **Position** **Priority**

Bill Info Oppose 2

Summary: Requires at least 50 percent of public purpose charge funds paid to nongovernmental entity to be invested in providing incentives to retail electricity customers for accelerating transportation electrification. Specifies that accelerating transportation electrification qualifies as new market transformation effort for purposes of public purpose charge expenditure standard.

1/15/19 S - Referred to Environment and Natural Resources.

1/14/19 S - Introduction and first reading. Referred to President's desk.

[SB 0267]	**Position**	**Priority**
[Bill Info]	Monitor	2

Summary: Transfers duties, functions and powers of State Department of Energy related to issuance of loans for small scale local energy projects to Oregon Business Development Department. Becomes operative on January 1, 2020. Requires loan contracts to make loans payable in full in event that Director of Oregon Business Development Department formally declares default of payment of loan or that project that is subject of loan fails to meet standards and criteria for projects. Becomes operative on January 1, 2020. Repeals certain provisions related to small scale local energy projects. Abolishes funds associated with provisions. Transfers moneys from abolished funds to Small Scale Local Energy Project Loan Fund. Appropriates moneys from General Fund to Oregon Business Development Department for purposes of Act. Repeals energy efficiency and sustainable technology loan program. Requires State Department of Energy to conduct audit of certain department activities. Declares emergency, effective on passage.

1/15/19 S - Referred to Environment and Natural Resources.
1/14/19 S - Introduction and first reading. Referred to President's desk.

[SB 0451]	**Position**	**Priority**
[Bill Info]	Monitor	2

Summary: Establishes eligibility for renewable energy certificates for facilities that generate electricity from direct combustion of municipal solid waste and became operational before January 1, 1995, if such facilities register with Western Renewable Energy Generation Information System at any time.

1/17/19 S - Referred to Carbon Reduction.
1/14/19 S - Introduction and first reading. Referred to President's desk.

[SB 0503]	**Position**	**Priority**
[Bill Info]	Support	2

Summary: Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.

1/16/19 S - Referred to Environment and Natural Resources.
1/14/19 S - Introduction and first reading. Referred to President's desk.

[SB 0508]	**Position**	**Priority**
[Bill Info]	Support	2

Summary: Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.

1/16/19 S - Referred to Environment and Natural Resources.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 5534	Position	Priority
Bill Info	Monitor	2

Summary: Limits certain biennial expenditures from fees, moneys or other revenues, including Miscellaneous Receipts, but excluding lottery funds and federal funds, collected or received by Public Utility Commission of Oregon. Limits biennial expenditures by commission from federal funds. Authorizes specified nonlimited expenditures. Declares emergency, effective July 1, 2019.

1/15/19 S - Referred to Ways and Means.

1/14/19 S - Introduction and first reading. Referred to President's desk.

HB 2496	Position	Priority
Bill Info	No Position	3

Summary: Includes battery storage in definition of "green energy technology." Defines "total contract price." Permits contracting agency, as alternative to including green energy technology in construction, reconstruction or major renovation of public building, to make expenditure to improve energy use efficiency in public building. Adds requirement to show results of analysis of total solar resource fraction that applies to site on which contracting agency intends to construct green energy technology that uses solar energy for space or water heating or to generate electricity. Permits contracting agency to use green energy for space or water heating or to generate electricity if total solar resource fraction exceeds 75 percent. Permits contracting agency to enter into agreement with another contracting agency to pool resources or share costs related to including green energy technology or woody biomass energy technology or making expenditure to improve building energy use efficiency in construction, reconstruction or major renovation. Becomes operative on January 1, 2020. Takes effect on 91st day following adjournment sine die.

1/18/19 H - Referred to Energy and Environment.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2497 **Position** **Priority**

Bill Info No Position 3

Summary: Adds battery storage to definition of "green energy technology" for public buildings that are emergency shelters or facilities for public safety. Requires Director of Department of Consumer and Business Services or appropriate municipality, if project or essential project is public building with anticipated cost of $1 million or more, to conduct plan review of project or essential project that determines and verifies that contracting agency that conducts procurement for project or essential project has complied with requirements to set aside 1.5 percent of contract price to include green energy technology in construction, reconstruction or major renovation of public building. Provides that building permit for project or essential project may not be issued until contracting agency complies with requirements. Becomes operative on January 1, 2020. Takes effect on 91st day following adjournment sine die.

1/15/19 H - Referred to Energy and Environment.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2501 **Position** **Priority**

Bill Info No Position 3

Summary: Establishes Task Force on Green Energy Corridors. Sunsets December 31, 2020. Takes effect on 91st day following adjournment sine die.

1/15/19 H - Referred to Energy and Environment with subsequent referral to Ways and Means.

1/14/19 H - First reading. Referred to Speaker's desk.

HCR 0009 **Position** **Priority**

Bill Info No Position 3

Summary: Supports development of closed-loop pump storage projects. Encourages Oregon utilities to use closed-loop pump storage.

1/29/19 H - Public Hearing scheduled.

1/18/19 H - Referred to Energy and Environment.

1/14/19 H - First reading. Referred to Speaker's desk.

SB 0040 **Position** **Priority**

Bill Info No Position 3

Summary: Modifies license fees for heating oil tank regulatory program. Modifies heating oil tank decommissioning certification fees and heating oil tank corrective action certification fees. Applies to fees assessed on and after January 1, 2020.

1/15/19	S - Referred to Environment and Natural Resources, then Ways and Means.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0416 | **Position** | **Priority**
Bill Info | No Position | 3

Summary: Authorizes public utilities to implement charitable utility bill payment round up programs. Directs Public Utility Commission to adopt rules governing round up programs.

1/16/19	S - Referred to Business and General Government.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0504 | **Position** | **Priority**
Bill Info | No Position | 3

Summary: Expands definition of "green energy technology" for purposes of public improvement contracts. Takes effect on 91st day following adjournment sine die.

1/16/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SCR 0001 | **Position** | **Priority**
Bill Info | No Position | 3

Summary: Declares legislative support for pump storage energy projects.

1/22/19	S - Public Hearing Scheduled.
1/15/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

From:	John Carr <jcarr@awec.solutions>
Sent time:	01/23/2019 09:15:32 AM
To:	Tony Hardenbrook
Subject:	RE: AWEC Oregon Legislative Update

Hi Tony,

Your understanding below is correct.

In legislative forums, our policy is that members are not publicly disclosed or identified – particularly on any legislative advocacy material.

If you see any issues arising in the future, let me know.

You're a valued member of AWEC.

Best regards,

John

From: Tony Hardenbrook <aharden2@uoregon.edu>
Sent: Tuesday, January 22, 2019 6:01 PM
To: John Carr <jcarr@awec.solutions>
Subject: RE: AWEC Oregon Legislative Update

Thanks John for understanding our delicate position.

R/
Tony

From: John Carr <jcarr@awec.solutions>
Sent: Tuesday, January 22, 2019 5:59 PM
To: Tony Hardenbrook <aharden2@uoregon.edu>
Subject: RE: AWEC Oregon Legislative Update

Greetings Tony,

Sorry about the delay. I've been buried today.

I'll touch base with my team and close the loop with you tomorrow.

In any event, you're a valued member of AWEC. Our goal is to meet your needs.

Best regards,

John

From: Tony Hardenbrook <aharden2@uoregon.edu>
Sent: Tuesday, January 22, 2019 1:59 PM
To: John Carr <jcarr@awec.solutions>
Subject: RE: AWEC Oregon Legislative Update

John,

There has been some internal strife at UO over our membership within AWEC. Given our status as a quasi-state entity and funding from the State of Oregon, there were concerns with the optics of our membership. This is most acute with Oregon legislation.

We spoke with some OHSU representatives and the report we received was that OHSU works with AWEC to remove OHSU's name from any AWEC position on legislation.

Can you confirm that this is how OHSU is being handled when it comes to legislation? We would like to pursue a membership that does not put UO at odds with the elected officials in Salem. Thanks.

R/
Tony

From: John Carr <jcarr@awec.solutions>
Sent: Tuesday, January 22, 2019 1:49 PM
To: Aldis Raisters <Aldis.Raisters@gapac.com>; Alex Koleber <akoleber@uoregon.edu>; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamaee <bmcnamee@timberproducts.com>; Beth Beatty <beth@cmsnaturalgas.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Bill Gillmore <billmg@penwool.com>; Bill Smith <Bill.Smith@airliquide.com>; Boz Van Houten <vanhoutb@ohsu.edu>; Brad Beavers <bbeavers@timberproducts.com>; Brad Van Cleve <bvc@dvclaw.com>; Brian Wood <brian.wood@nippondynawave.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <[redacted]>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted] Chad Sorber <sorber@ohsu.edu>; Chad Stokes <cstokes@cablehuston.com>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <Chris_h@columbiasteel.com>; Chris Ingram <chris.ingram@recsilicon.com>; Chuck Gates <[redacted] Clay Riding <clayr@nw-iw.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Courtney Smith <courtney.smith@shell.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leone <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Daniel Riley <daniel.t.riley@tsocorp.com>; Daryll Fuentes <dfuentes@usg.com>; Dave Post <Dave.Post@wahchang.com>; David A Barge <DABarge@marathonpetroleum.com>; David Clemens <david.clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Hawk <[redacted]>; David Jones <david.jones@swansongroup.biz>; David Mitcheltree <DBM@eesconsulting.com>; David Tobin <DavidTobin@boisepaper.com>; Dean Gallinger <dean.m.gallinger@boeing.com>; Delee Shoemaker <delees@microsoft.com>; Desiree Higgins <desireeh@uoregon.edu>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <don.sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Betzold <CMS@cmsnaturalgas.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <Drew.Gilpin@evrazna.com>; Ed Coghlan <Ed.coghlan@onsemi.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@pccstructurals.com>; Eric Streicher <Eric.Streicher@airgas.com>; Fawn Barrie <fbarrie@legadv.com>; Gary Collison <gcollison@pccstructurals.com>; Gary Londo <gary.j.londo@boeing.com>; Hugh Pierce <Hugh.O.Pierce@tsocorp.com>; Irene Plenefisch <irenep@microsoft.com>; Jake Evans <Jake.evans@onsemi.com>; James Clarken <James_Clarken@oxy.com>; James Price <JaDPrice@gapac.com>; Janese Pierson <Janese.Pierson@ipaper.com>; Jared Sommer <sommerj@byui.edu>; Jasmin Simmons <JAMIN.SIMMONS@resolutefp.com>; Jason Hakes <jason.c.hakes@intel.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jeff Steed <jeff.steed@northwesthardwoods.com>; Jena Hackett <Jena.Hackett@ipaper.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jenny Dresler <jenny@pacounsel.org>; Jim Duke <jduke@idahoan.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; Joe Burrell <Joseph.g.burrell@jci.com>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell.com>; Josh D. Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Justin Pino <jpino@uetllc.com>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Kelly Francone <kfrancone@energystrat.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Kyle Williams <williamsk@byui.edu>; Larry Voos <larry.voos@norpacpaper.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Leslie Adams <adamsla@airproducts.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Martha Cox <Martha_C@columbiasteel.com>; Marty Sedler <marty.sedler@intel.com>; Mary Catherine McAleer <marycatherine.mcaleer@weyerhaeuser.com>; Mary McCordic <mary.mccordic@shell.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <Matt.Upmeyer@lambweston.com>; Melissa Gomboskey <[redacted] Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <mkuhn@westrock.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Nancy Richardson <Nancy.richardson@bp.com>; Nick Avenetti <nick@perlite.com>; Nick Kaiser <nick.kaiser@lvpnp.com>; Noel Mak <Noel.Mak@atimetals.com>; Ortiz, Patrick W <patrick.ortiz@westrock.com>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <plydon@lhs.org>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Paul Langley <langley@uoregon.edu>; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Schultz <randy.schultz@bp.com>; Richard Greenwell <rgreenwell@uetllc.com>; Richard White <richard.a.white7@boeing.com>; Rick Harper <[redacted] Rick Kunz <rick.kunz@shell.com>; Rick Stricker <rstricker@baf.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Robert Pierce <Robert.pierce@shell.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Rusty Williams <williwk@bp.com>; Ryan Beaver <Ryan.beaver@weyerhaeuser.com>; Sam Liebelt <samuel.liebelt@westrock.com>; Sam Merrick <merricks@byui.edu>; Samantha Julian <Samanthaj@pacounsel.org>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <SRHawley@marathonpetroleum.com>; Sharon Andersen <Sharon.w.anderson@intel.com>; Skyler Mlasko <Skyler.Mlasko@northwesthardwoods.com>; Spiro Xenos

<spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steve O'Brien <sobrien@baf.com>; Steven Castracane <steven.castracane@linde.com>; Teresa Acosta <teresa.acosta@calpinesolutions.com>; Tim Boyd <[redacted]>; Tim Root <Timothy.Root@axiall.com>; Todd Wiseman <todd.wiseman@solvay.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tom Yarborough <tom@richlandpaper.com>; Tommy Brooks <tbrooks@cablehuston.com>; Tony Hardenbrook <aharden2@uoregon.edu>; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; Willaim McSherry <william.mcsherry@boeing.com>; Phil Foss <phil.foss@onsemi.com>
Subject: AWEC Oregon Legislative Update

AWEC members,

Please find attached the Oregon weekly legislative update from our lobbyists at Pac Counsel.

Regards,

John

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell: [redacted]
Website: http://www.awec.solutions
E-mail: jcarr@awec.solutions

From: John Carr <jcarr@awec.solutions>

Sent time: 01/29/2019 01:09:36 PM

To: Aldis Raisters <Aldis.Raisters@gapac.com>; Alex Koleber; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamaee <bmcnamee@timberproducts.com>; Beth Beatty <beth@cmsnaturalgas.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials com>; Bill Gillmore <billmg@penwool com>; Bill Smith <Bill.Smith@airliquide.com>; Brad Beavers <bbeavers@timberproducts.com>; Brad Van Cleve <bvc@dvclaw.com>; Brian Wood <brian.wood@nippondynawave.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <[redacted]>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Chad Sorber <sorber@ohsu.edu>; Chad Stokes <cstokes@cablehuston.com>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <Chris_h@columbiasteel.com>; Chris Ingram <chris.ingram@recsilicon.com>; Chuck Gates <[redacted]; Clay Riding <clayr@nw-iw.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Courtney Smith <courtney.smith@shell.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leone <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Daniel Riley <daniel.t.riley@tsocorp.com>; Daryll Fuentes <dfuentes@usg.com>; Dave Post <Dave.Post@wahchang.com>; David A Barge <DABarge@marathonpetroleum.com>; David Clemens <david.clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Hawk <[redacted]>; David Jones <david.jones@swansongroup.biz>; David Mitcheltree <DBM@eesconsulting.com>; David Tobin <DavidTobin@boisepaper.com>; Dean Gallinger <dean.m.gallinger@boeing.com>; Delee Shoemaker <delees@microsoft.com>; Desiree Higgins; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <don.sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Betzold <CMS@cmsnaturalgas.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <Drew.m.bryck@boeing.com>; Drew Gilpin <Drew.Gilpin@evrazna.com>; Ed Coghlan <Ed.coghlan@onsemi.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@pccstructurals.com>; Eric Streicher <Eric.Streicher@airgas.com>; Fawn Barrie <fbarrie@legadv.com>; Gary Collison <gcollison@pccstructurals.com>; Gary Londo <gary.j.londo@boeing.com>; Hugh Pierce <Hugh.O.Pierce@tsocorp.com>; Irene Plenefisch <irenep@microsoft com>; Jake Evans <Jake.evans@onsemi.com>; James Clarken <James_Clarken@oxy.com>; James Price <JaDPrice@gapac.com>; Janese Pierson <Janese.Pierson@ipaper.com>; Jared Sommer <sommerj@byui.edu>; Jasmin Simmons <JAMIN.SIMMONS@resolutefp.com>; Jason Hakes <jason.c.hakes@intel.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jeff Steed <jeff.steed@northwesthardwoods.com>; Jena Hackett <Jena.Hackett@ipaper.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jenny Dresler <jenny@pacounsel.org>; Jim Duke <jduke@idahoan.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; Joe Burrell <Joseph.g.burrell@jci.com>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell.com>; Josh D. Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Justin Pino <jpino@uetllc.com>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Kelly Francone <kfrancone@energystrat.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Kristin Marshall <kristin.b.marshall@boeing.com>; Kyle Williams <williamsk@byui.edu>; Larry Voos <larry.voos@norpacpaper.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Leslie Adams <adamsla@airproducts.com>; Lori Evans <lori@lorievans.us>; Marcie Peters <marcie.peters@solvay.com>; Mark Brown <Mark.Brown@teck.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Martha Cox <Martha_C@columbiasteel.com>; Marty Sedler <marty.sedler@intel.com>; Mary Catherine McAleer <marycatherine.mcaleer@weyerhaeuser.com>; Mary McCordic <mary.mccordic@shell.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <Matt.Upmeyer@lambweston.com>; Melissa Gomboskey <[redacted]; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <mkuhn@westrock.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Nancy Richardson <Nancy.richardson@bp.com>; Nick Avenetti <nick@perlite.com>; Nick Kaiser <nick.kaiser@lvpnp.com>; Noel Mingo <mingon@ohsu.edu>; Ortiz, Patrick W <patrick.ortiz@westrock.com>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <plydon@lhs.org>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Paul Langley; Phil Pesek <Phil.Pesek@teck.com>; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Schultz <randy.schultz@bp.com>; Richard Greenwell <rgreenwell@uetllc.com>; Richard White <richard.a.white7@boeing.com>; Rick Harper <[redacted]; Rick Kunz <rick.kunz@shell.com>; Rick Stricker <rstricker@baf.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Robert Pierce <Robert.pierce@shell.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Rusty Williams <williwk@bp.com>; Ryan Beaver <Ryan.beaver@weyerhaeuser.com>; Sam Liebelt <samuel.liebelt@westrock.com>; Sam Merrick <merricks@byui.edu>; Samantha Julian <Samanthaj@pacounsel.org>; Sarah Schack <sschack@timberproducts.com>; Scott Edgar <Edgar.Scott@kaiseraluminum.co>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <SRHawley@marathonpetroleum.com>; Sharon Andersen <Sharon.w.anderson@intel.com>; Skyler Mlasko <Skyler.Mlasko@northwesthardwoods.com>; Spiro Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steve O'Brien <sobrien@baf.com>; Steven Castracane <steven.castracane@linde.com>; Teresa Acosta <teresa.acosta@calpinesolutions.com>; Tim Boyd <[redacted]>; Tim Root <Timothy.Root@axiall.com>; Todd Wiseman <todd.wiseman@solvay.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tom Yarborough <tom@richlandpaper.com>; Tommy Brooks <tbrooks@cablehuston.com>; Tony Hardenbrook; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; Willaim McSherry <william.mcsherry@boeing.com>

Subject: AWEC Quarterly Meeting In Portland, Oregon, March 6th

---

Dear AWEC Members:

AWEC will be hosting its 1st meeting of the year on Wednesday, March 6th, at the Portland Sheraton Airport Hotel from 8:00 AM to 3:30 PM PST. A seated breakfast will be served beginning at **8:00 AM**, with the electric portion of the meeting scheduled from **9:00 am to noon**, with lunch following.

I am very pleased to announce that Dave Danner, Chair of the WUTC, will be our keynote speaker. With all the significant changes occurring in the energy field, it will be a unique opportunity to hear Dave's insights from a Chairman's perspective. I encourage all members to attend.

The gas section of the meeting will follow the luncheon from **1:00 PM to 3:30 PM**.

Call-in information will be available when the agenda is issued. The complete documents will be sent out the day before the meeting.

We do have a limited reduced hotel room rate at $159.

https://www.marriott.com/hotels/travel/pdxsi-sheraton-portland-airport-hotel/

Please RSVP at kfrancone@energystrat.com.

Please let us know if you have any questions.

Regards,

John

--

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell:
Website: http://www.awec.solutions
E-mail: jcarr@awec.solutions

--

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell:
Website: http://www.awec.solutions
E-mail: jcarr@awec.solutions

From: John Carr <jcarr@awec.solutions>

Sent time: 01/28/2019 09:50:09 AM

To: Aldis Raisters <Aldis.Raisters@gapac.com>; Alex Koleber; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamaee <bmcnamee@timberproducts.com>; Beth Beatty <beth@cmsnaturalgas.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Bill Gillmore <billmg@penwool.com>; Bill Smith <Bill.Smith@airliquide.com>; Boz Van Houten <vanhoutb@ohsu.edu>; Brad Beavers <bbeavers@timberproducts.com>; Brad Van Cleve <bvc@dvclaw.com>; Brian Wood <brian.wood@nippondynawave.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <[redacted]>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Chad Sorber <sorber@ohsu.edu>; Chad Stokes <cstokes@cablehuston.com>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <Chris_h@columbiasteel.com>; Chris Ingram <chris.ingram@recsilicon.com>; Chuck Gates <[redacted]; Clay Riding <clayr@nw-iw.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Courtney Smith <courtney.smith@shell.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leone <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Daniel Riley <daniel.t.riley@tsocorp.com>; Daryll Fuentes <dfuentes@usg.com>; Dave Post <Dave.Post@wahchang.com>; David A Barge <DABarge@marathonpetroleum.com>; David Clemens <david.clemens@darigold com>; David Elliot <davidelliott@boisebuilding.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; David Mitcheltree <DBM@eesconsulting.com>; David Tobin <DavidTobin@boisepaper.com>; Dean Gallinger <dean.m.gallinger@boeing.com>; Delee Shoemaker <delees@microsoft.com>; Desiree Higgins; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <don.sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Betzold <CMS@cmsnaturalgas.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <Drew.m.bryck@boeing.com>; Drew Gilpin <Drew.Gilpin@evrazna.com>; Ed Coghlan <Ed.coghlan@onsemi.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@pccstructurals.com>; Eric Streicher <Eric.Streicher@airgas.com>; Fawn Barrie <fbarrie@legadv.com>; Gary Collison <gcollison@pccstructurals.com>; Gary Londo <gary.j.londo@boeing.com>; Hugh Pierce <Hugh.O.Pierce@tsocorp.com>; Irene Plenefisch <irenep@microsoft.com>; Jake Evans <Jake.evans@onsemi.com>; James Clarken <James_Clarken@oxy.com>; James Price <JaDPrice@gapac.com>; Janese Pierson <Janese.Pierson@ipaper.com>; Jared Sommer <sommerj@byui.edu>; Jasmin Simmons <JAMIN.SIMMONS@resolutefp.com>; Jason Hakes <jason.c.hakes@intel.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jeff Steed <jeff.steed@northwesthardwoods.com>; Jena Hackett <Jena.Hackett@ipaper.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jenny Dresler <jenny@pacounsel.org>; Jim Duke <jduke@idahoan.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; Joe Burrell <Joseph.g.burrell@jci.com>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell.com>; Josh D. Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Justin Pino <jpino@uetllc.com>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Kelly Francone <kfrancone@energystrat.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide com>; Kristin Marshall <kristin.b.marshall@boeing.com>; Kyle Williams <williamsk@byui.edu>; Larry Voos <larry.voos@norpacpaper.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Leslie Adams <adamsla@airproducts.com>; Lori Evans <lori@lorievans.us>; Marcie Peters <marcie.peters@solvay.com>; Mark Brown <Mark.Brown@teck.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Martha Cox <Martha_C@columbiasteel.com>; Marty Sedler <marty.sedler@intel.com>; Mary Catherine McAleer <marycatherine.mcaleer@weyerhaeuser.com>; Mary McCordic <mary.mccordic@shell.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <Matt.Upmeyer@lambweston.com>; Melissa Gomboskey <[redacted]; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <mkuhn@westrock.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Nancy Richardson <Nancy.richardson@bp.com>; Nick Avenetti <nick@perlite.com>; Nick Kaiser <nick.kaiser@lvpnp.com>; Ortiz, Patrick W <patrick.ortiz@westrock.com>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <plydon@lhs.org>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Paul Langley; Phil Pesek <Phil.Pesek@teck.com>; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Schultz <randy.schultz@bp.com>; Richard Greenwell <rgreenwell@uetllc.com>; Richard White <richard.a.white7@boeing.com>; Rick Harper <[redacted]; Rick Kunz <rick.kunz@shell.com>; Rick Stricker <rstricker@baf.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Robert Pierce <Robert.pierce@shell.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Ryan Beaver <Ryan.beaver@weyerhaeuser.com>; Sam Liebelt <samuel.liebelt@westrock.com>; Sam Merrick <merricks@byui.edu>; Samantha Julian <Samanthaj@pacounsel.org>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <SRHawley@marathonpetroleum.com>; Sharon Andersen <Sharon.w.anderson@intel.com>; Skyler Mlasko <Skyler.Mlasko@northwesthardwoods.com>; Spiro Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steve O'Brien <sobrien@baf.com>; Steven Castracane <steven.castracane@linde.com>; Ted <williwk@bp.com>; Teresa Acosta <teresa.acosta@calpinesolutions.com>; Tim Boyd [redacted]; Tim Root <Timothy.Root@axiall.com>; Todd Wiseman <todd.wiseman@solvay.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tom Yarborough <tom@richlandpaper.com>; Tommy Brooks <tbrooks@cablehuston.com>; Tony Hardenbrook; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; Willaim McSherry <william.mcsherry@boeing.com>

Subject: AWEC Oregon Legislative Update

Attachments: AWEC Oregon Legislative Report - 1 28 19.pdf

AWEC members,

Please see the Oregon legislative update from our lobbyists at PAC Counsel.

Regards,

John

--

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell:
Website: http://www.awec.solutions
E-mail: jcarr@awec.solutions

Oregon Weekly Report

January 28, 2019

What Happened This Week at the Oregon Capitol

This week, the Oregon legislature officially convened. Committees got off to slow starts, largely having informational hearings as many members are new and are getting up introductory briefings in their subject areas.

- **Cap and Trade Update:** On Friday, legislators heard from two invited speakers, Angus Duncan and Dr. Phil Mote, who presented background information on climate science—teeing up the conversation to pass cap-and-trade this session. We still haven't seen a copy of the cap-and-trade bill, but anticipate the release of legislation by January 31, 2019. February 4th is slated for an informational hearing with panelists from both sides of this issue. Following the informational meeting, legislators plan to open up the hearing to the public on February 8th and February 11th. We will keep you updated as details emerge.

  AWEC is partnering with the Oregon Manufacturers and Commerce to lead the Partnership for Oregon Communities coalition. Partnership for Oregon Communities is a grassroots coalition committed to enacting policies that both increase the financial security of Oregonians and protections for our environment. It is comprised of farmers, employers, and community leaders from around the state. The coalition will utilize lobby strategies, as well as grassroots efforts, to help influence the conversations around cap-and-trade. Our focus with the coalition is to ensure AWEC members' interests are protected as the legislature discusses carbon pricing bills, which could have significant impacts on the electricity and natural gas costs for AWEC members.

  Learn more at https://partnershipfororegon.com/

- **PUC Overview:** AWEC attorney, Tyler Pepple, testified before the House Energy and Environment Committee as part of a panel on the role of regulation and the PUC. The committee also received a briefing on the Oregon Department of Energy's 2018 biennial energy report, an introduction to consumer owned utilities, independent power associations, and investor owned utilities.

- **Public Hearing on SB 38:** SB 38 clarifies that thermal energy RECs can be applied toward RPS compliance. Previous RPS legislation did not specifically list thermal energy generated from biomass as a compliance instrument for RPS. Thermal energy would have the same

requirements as electric generation under SB 38. AWEC participated in the Oregon Department of Energy's workgroup on the bill. The bill is scheduled to be voted out of Senate and Natural Resource Committee next week.

- **OPUC Fee Increase:** AWEC was approached by the PUC requesting support to increase funding to ensure adequate funding of the Utility Program and Policy and Administration. The PUC seeks an increase in the annual utility fee from .30 percent of a utility's gross operating revenue to a maximum of .45 percent for energy and water utilities. Funding will help address staffing levels needed for the PUC to do their job and maintain experiences staff. AWEC will send a letter supporting the PUC's budget needs. The increase should give the PUC sufficient funding to meet obligations beyond 2023.

What's Going on Next Week

- **Joint Carbon Committee:** On Monday evening, the committee will listen to a panel discussing the tribal perspectives on carbon reduction as well as a presentation from Jon Enlet, the Consulate General of the Federated States of Micronesia. The low-income utility programs working group will provide an update and panelists from LCDC on a climate change adaption framework. We anticipate that a draft of the cap-and-trade bill to be released by the end of the week.

- **House Energy and Environment:** HB 2242 is scheduled for a public hearing in the House Energy and Environment Committee. Legislation authorizes the PUC to consider differential energy burden and other inequities of affordability in rates.

- **Senate Environment and Natural Resources:** The Senate committee is scheduled to hold a work session on SB 38. It will also hold an informational hearing on climate leadership in Alberta with Robert Savage, Assistant Deputy Minister from the Alberta Climate Change Office testifying.

Priority Bills AWEC is Tracking

Alliance of Western Energy Consumers

HB 5044	Position	Priority
Bill Info	Oppose	1

Summary: Appropriates moneys from General Fund to Oregon Climate Authority for biennial expenses. Limits biennial expenditures from fees, moneys or other revenues, including Miscellaneous Receipts, but excluding lottery funds and federal funds, collected or received by authority. Limits biennial expenditures by authority from certain lottery moneys. Limits biennial expenditures by authority from federal funds. Authorizes specified nonlimited expenditures. Declares emergency, effective July 1, 2019.

1/23/19	H - Assigned to Subcommittee On Natural Resources.
1/15/19	H - Referred to Ways and Means.
1/14/19	H - First reading. Referred to Speaker's desk.

SB 0089 **Position** **Priority**

Bill Info Oppose 1

Summary: Requires Environmental Quality Commission to adopt by rule program for assessing net impacts of state policies and programs for reducing greenhouse gas emissions. Declares emergency, effective on passage.

1/15/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0098 **Position** **Priority**

Bill Info Monitor 1

Summary: Requires Public Utility Commission to adopt by rule renewable natural gas program for natural gas utilities to recover prudently incurred qualified investments in meeting certain targets for including renewable natural gas in gas purchases for distribution to retail natural gas customers. Requires commission to adopt rules no later than December 31, 2019. Takes effect on 91st day following adjournment sine die.

1/25/19	S - Work Session held.
1/17/19	S - Referred to Carbon Reduction.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0220 **Position** **Priority**

Bill Info Oppose 1

Summary: Requires Department of Environmental Quality to conduct study related to greenhouse gas emissions. Sunsets January 2, 2022.

1/15/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0598 **Position** **Priority**

Bill Info Oppose 1

Summary: Changes name of Oregon Global Warming Commission to Oregon Climate Change Commission. Requires commission to appoint executive director. Appropriates moneys to commission for purposes related to executive director of commission. Modifies certain duties of commission and of certain nonvoting members of commission. Modifies certain duties of certain agencies of state government with regard to duties of commission.

1/17/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

HB 2093 **Position** **Priority**

Bill Info Monitor 2

Summary: Permits Oregon Department of Administrative Services to contract with other entity, and to participate in, sponsor, conduct or administer cooperative procurements, for purpose of acquiring, installing, maintaining or operating devices or facilities to deliver electricity to public for electric motor vehicles. Specifies that solely for purpose of contracting agency's participating in, sponsoring, conducting or administering cooperative procurement, device or facility for delivering electricity to public for electric motor vehicles is not public improvement. Becomes operative on January 1, 2020. Takes effect on 91st day following adjournment sine die.

1/28/19 H - Public Hearing scheduled.

1/15/19 H - Referred to Rules.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2242 **Position** **Priority**

Bill Info Monitor 2

Summary: Authorizes Public Utility Commission to consider differential energy burden and other inequities of affordability in rates. Authorizes public utilities to enter agreements to provide financial assistance for organizations to represent in regulatory proceedings before commission interests of low-income customers and customers that are members of environmental justice communities. Establishes Office of the Low-Income and Environmental Justice Advocate within commission. Authorizes office to intervene in certain proceedings. Directs commission to establish public process for investigating ways to address and mitigate differential energy burdens on classes of electric company customers and other inequities of affordability. Requires commission to report findings to interim committees of Legislative Assembly related to energy and business no later than September 15, 2020. Sunsets public process January 2, 2021.

1/29/19 H - Public Hearing scheduled.

1/15/19 H - Referred to Energy and Environment with subsequent referral to Ways and Means.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2322 **Position** **Priority**

Bill Info Monitor 2

Summary: Requires Land Conservation and Development Commission to amend statewide land use planning goals related to energy to incorporate development of renewable energy facilities and reduction of greenhouse gas emissions and to match state energy policies.

1/18/19 H - Referred to Energy and Environment.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2329	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Modifies definition of "energy facility" for purposes of regulation of energy facilities by Energy Facility Siting Council. Broadens provisions for types of electric power generating plants that may elect to obtain site certificate from council if otherwise not required to obtain site certificate.

1/18/19 H - Referred to Energy and Environment.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2494	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Extends operation of public purpose charges until January 1, 2036.

1/18/19 H - Referred to Energy and Environment.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2611	**Position**	**Priority**
Bill Info	Support	2

Summary: Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.

1/18/19 H - Referred to Energy and Environment.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2618	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Requires State Department of Energy to adopt by rule program for providing rebates for purchase, construction or installation of residential and commercial solar electric systems and paired solar and storage systems. Sets forth rebate limits under program. Establishes Rooftop Solar Incentive Fund. Continuously appropriates moneys in fund to department to issue rebates. Limits total amount of rebates issued annually for commercial systems. Appropriates moneys from General Fund to department for deposit in Rooftop Solar Incentive Fund. Requires department to submit annual report on program to Legislative Assembly. Sunsets January 2, 2024. Takes effect on 91st day following adjournment sine die.

1/15/19 H - Referred to Energy and Environment with subsequent referral to Ways and Means.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 5017	Position	Priority
Bill Info	Monitor	2

Summary: Appropriates moneys from General Fund to Department of Environmental Quality for certain biennial expenses. Limits biennial expenditures from fees, moneys or other revenues, including Miscellaneous Receipts, specified bond proceeds and specified federal funds, but excluding lottery funds and other federal funds, collected or received by department. Limits biennial expenditures from lottery moneys allocated from Parks and Natural Resources Fund to department. Authorizes specified nonlimited expenditures. Limits certain biennial expenditures by department from federal funds. Declares emergency, effective July 1, 2019.

1/23/19	H - Assigned to Subcommittee On Natural Resources.
1/15/19	H - Referred to Ways and Means.
1/14/19	H - First reading. Referred to Speaker's desk.

SB 0038	Position	Priority
Bill Info	Support	2

Summary: Modifies provisions for treatment of renewable energy certificates issued for generation of thermal energy.

1/29/19	S - Work Session scheduled.
1/22/19	S - Public Hearing held.
1/15/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0068	Position	Priority
Bill Info	No Position	2

Summary: Increases annual fee imposed on public utilities and telecommunications providers for purpose of defraying costs of Public Utility Commission. Declares emergency, effective on passage.

1/15/19	S - Referred to Business and General Government.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0091	Position	Priority
Bill Info	Oppose	2

Summary: Requires at least 50 percent of public purpose charge funds paid to nongovernmental entity to be invested in providing incentives to retail electricity customers for accelerating transportation electrification. Specifies that accelerating transportation electrification qualifies as new market transformation effort for purposes of public purpose charge expenditure standard.

1/15/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0267 | **Position** | **Priority**

Bill Info | Monitor | 2

Summary: Transfers duties, functions and powers of State Department of Energy related to issuance of loans for small scale local energy projects to Oregon Business Development Department. Becomes operative on January 1, 2020. Requires loan contracts to make loans payable in full in event that Director of Oregon Business Development Department formally declares default of payment of loan or that project that is subject of loan fails to meet standards and criteria for projects. Becomes operative on January 1, 2020. Repeals certain provisions related to small scale local energy projects. Abolishes funds associated with provisions. Transfers moneys from abolished funds to Small Scale Local Energy Project Loan Fund. Appropriates moneys from General Fund to Oregon Business Development Department for purposes of Act. Repeals energy efficiency and sustainable technology loan program. Requires State Department of Energy to conduct audit of certain department activities. Declares emergency, effective on passage.

1/15/19 S - Referred to Environment and Natural Resources.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0451 | **Position** | **Priority**

Bill Info | Monitor | 2

Summary: Establishes eligibility for renewable energy certificates for facilities that generate electricity from direct combustion of municipal solid waste and became operational before January 1, 1995, if such facilities register with Western Renewable Energy Generation Information System at any time.

1/25/19 S - Work Session held.

1/17/19 S - Referred to Carbon Reduction.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0503 | **Position** | **Priority**

Bill Info | Support | 2

Summary: Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.

1/16/19 S - Referred to Environment and Natural Resources.

1/14/19 S - Introduction and first reading. Referred to President's desk.

[SB 0508]	**Position**	**Priority**
[Bill Info]	Support	2

Summary: Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.

1/16/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

[SB 5534]	**Position**	**Priority**
[Bill Info]	Monitor	2

Summary: Limits certain biennial expenditures from fees, moneys or other revenues, including Miscellaneous Receipts, but excluding lottery funds and federal funds, collected or received by Public Utility Commission of Oregon. Limits biennial expenditures by commission from federal funds. Authorizes specified nonlimited expenditures. Declares emergency, effective July 1, 2019.

1/30/19	S - Public Hearing Scheduled.
1/23/19	S - Assigned to Subcommittee On Transportation and Economic Development.
1/15/19	S - Referred to Ways and Means.
1/14/19	S - Introduction and first reading. Referred to President's desk.

From: John Carr <jcarr@awec.solutions>

Sent time: 01/28/2019 08:48:51 AM

To: Aldis Raisters <Aldis.Raisters@gapac.com>; Alex Koleber; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamaee <bmcnamee@timberproducts.com>; Beth Beatty <beth@cmsnaturalgas.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Bill Gillmore <billmg@penwool.com>; Bill Smith <Bill.Smith@airliquide.com>; Boz Van Houten <vanhoutb@ohsu.edu>; Brad Beavers <bbeavers@timberproducts.com>; Brad Van Cleve <bvc@dvclaw.com>; Brian Wood <brian.wood@nippondynawave.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <[redacted]>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Chad Sorber <sorber@ohsu.edu>; Chad Stokes <cstokes@cablehuston.com>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <Chris_h@columbiasteel.com>; Chris Ingram <chris.ingram@recsilicon.com>; Chuck Gates <[redacted]; Clay Riding <clayr@nw-iw.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Courtney Smith <courtney.smith@shell.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leone <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Daniel Riley <daniel.t.riley@tsocorp.com>; Daryll Fuentes <dfuentes@usg.com>; Dave Post <Dave.Post@wahchang.com>; David A Barge <DABarge@marathonpetroleum.com>; David Clemens <david.clemens@darigold com>; David Elliot <davidelliott@boisebuilding.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; David Mitcheltree <DBM@eesconsulting.com>; David Tobin <DavidTobin@boisepaper.com>; Dean Gallinger <dean.m.gallinger@boeing.com>; Delee Shoemaker <delees@microsoft.com>; Desiree Higgins; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <don.sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Betzold <CMS@cmsnaturalgas.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <Drew.Gilpin@evrazna.com>; Ed Coghlan <Ed.coghlan@onsemi.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@pccstructurals.com>; Eric Streicher <Eric.Streicher@airgas.com>; Fawn Barrie <fbarrie@legadv.com>; Gary Collison <gcollison@pccstructurals.com>; Gary Londo <gary.j.londo@boeing.com>; Hugh Pierce <Hugh.O.Pierce@tsocorp.com>; Irene Plenefisch <irenep@microsoft.com>; Jake Evans <Jake.evans@onsemi.com>; James Clarken <James_Clarken@oxy.com>; James Price <JaDPrice@gapac.com>; Janese Pierson <Janese.Pierson@ipaper.com>; Jared Sommer <sommerj@byui.edu>; Jasmin Simmons <JAMIN.SIMMONS@resolutefp.com>; Jason Hakes <jason.c.hakes@intel.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jeff Steed <jeff.steed@northwesthardwoods.com>; Jena Hackett <Jena.Hackett@ipaper.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jenny Dresler <jenny@pacounsel.org>; Jim Duke <jduke@idahoan.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; Joe Burrell <Joseph.g.burrell@jci.com>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell.com>; Josh D. Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Justin Pino <jpino@uetllc.com>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Kelly Francone <kfrancone@energystrat.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide com>; Kristin Marshall <kristin.b.marshall@boeing.com>; Kyle Williams <williamsk@byui.edu>; Larry Voos <larry.voos@norpacpaper.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Leslie Adams <adamsla@airproducts.com>; Lori Evans <lori@lorievans.us>; Marcie Peters <marcie.peters@solvay.com>; Mark Brown <Mark.Brown@teck.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Martha Cox <Martha_C@columbiasteel.com>; Marty Sedler <marty.sedler@intel.com>; Mary Catherine McAleer <marycatherine.mcaleer@weyerhaeuser.com>; Mary McCordic <mary.mccordic@shell.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <Matt.Upmeyer@lambweston.com>; Melissa Gomboskey <[redacted]; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <mkuhn@westrock.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Nancy Richardson <Nancy.richardson@bp.com>; Nick Avenetti <nick@perlite.com>; Nick Kaiser <nick.kaiser@lvpnp.com>; Noel Mak <Noel.Mak@atimetals.com>; Ortiz, Patrick W <patrick.ortiz@westrock.com>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <plydon@lhs.org>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Paul Langley; Phil Pesek <Phil.Pesek@teck.com>; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Schultz <randy.schultz@bp.com>; Richard Greenwell <rgreenwell@uetllc.com>; Richard White <richard.a.white7@boeing.com>; Rick Harper <[redacted]; Rick Kunz <rick.kunz@shell.com>; Rick Stricker <rstricker@baf.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Robert Pierce <Robert.pierce@shell.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Rusty Williams <williwk@bp.com>; Ryan Beaver <Ryan.beaver@weyerhaeuser.com>; Sam Liebelt <samuel.liebelt@westrock.com>; Sam Merrick <merricks@byui.edu>; Samantha Julian <Samanthaj@pacounsel.org>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <SRHawley@marathonpetroleum.com>; Sharon Andersen <Sharon.w.anderson@intel.com>; Skyler Mlasko <Skyler.Mlasko@northwesthardwoods.com>; Spiro Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steve O'Brien <sobrien@baf.com>; Steven Castracane <steven.castracane@linde.com>; Teresa Acosta <teresa.acosta@calpinesolutions.com>; Tim Boyd <[redacted]>; Tim Root <Timothy.Root@axiall.com>; Todd Wiseman <todd.wiseman@solvay.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tom Yarborough <tom@richlandpaper.com>; Tommy Brooks <tbrooks@cablehuston.com>; Tony Hardenbrook; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; Willaim McSherry <william.mcsherry@boeing.com>

Subject: AWEC Washington Legislative Update

Attachments: AWEC Washington Legislative Update 012719.docx

AWEC members,

Please see the attached legislative update from our Washington lobbyist, Tim Boyd.

Regards,

John

--

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell:
Website: http://www.awec.solutions
E-mail: jcarr@awec.solutions

the TSB COMMUNICATIONS group
public
government
media
relations

Weekly Legislative Report
AWEC
January 27, 2019

Lawmakers Settle into a Rhythm in Week Two

After a hectic first week, lawmakers settled into a rhythm in week two. A very fast-paced rhythm featuring crowded agendas and packed hearing rooms, but a rhythm nonetheless. Much of the work, across a variety of committees, was centered on Governor Jay Inslee's request legislation, including clean energy, energy efficient buildings, low carbon fuel standard, hydrofluorocarbons and transportation electrification. Some of these measures have already been voted out of committee, and more are scheduled for executive action this week.

Topping our agenda, SB 5116 (clean energy) which is scheduled for executive action in the Senate Environment, Energy & Technology Committee on Tuesday (1/29). Working with Tyler Pepple (Davison Van Cleve), I've been in contact with the Governor's Office, key legislators and staff members all weekend offering comments and amendments. We're definitely in damage control mode trying to limit cost impacts, maintain reliability and preserve customer options.

I've also been working with Chad Stokes (Cable Huston) to assess the full impacts of SB 5293, which targets energy efficiencies in commercial buildings and mandates natural gas conservation. Unfortunately, an entire section of the bill vilifies the use of natural gas and associated methane emissions.

Upcoming Events

Environment & Energy (House) - HHR B, JLOB - 1/28 @ 1:30pm

- HB 1332 - Public Hearing - Concerning updating and streamlining energy facility site evaluation council operations.

Environment, Energy & Technology (Senate) - SHR 1, JACB - 1/29 @ 10:00am

- SB 5116 - Exec Session - Supporting Washington's clean energy economy and transitioning to a clean, affordable, and reliable energy future.

Agriculture, Water, Natural Resources & Parks (Senate) - SHR 3, JACB - 1/29 @ 1:30pm

- SB 5145 - Public Hearing - Concerning the use of hydraulic fracturing in the exploration for and production of oil and natural gas.

Environment & Energy (House) - HHR B, JLOB - 1/29 @ 3:30pm

- HB 1257 - Public Hearing - Concerning energy efficiency.

Rural Development, Agriculture, & Natural Resources (House) - HHR B, JLOB - 1/30 @ 8:00am

- HB 1334 - Public Hearing - Concerning electric utility wildland fire prevention.

Environment & Energy (House) - HHR B, JLOB - 1/31 @ 8:00am

- HB 1126 - Exec Session - Enabling electric utilities to prepare for the distributed energy future.
- HB 1332 - Exec Session - Concerning updating and streamlining energy facility site evaluation council operations.
- HB 1113 - Exec Session - Amending state greenhouse gas emission limits for consistency with the most recent assessment of climate change science and with the United States' commitment under the 2015 Paris climate agreement.

Local Government (Senate) - SHR 3, JACB - 1/31 @ 8:00am

- SB 5191 - Public Hearing - Concerning public utility districts' contracts for work or materials. (Hearing is on the Proposed Substitute.)

Agriculture, Water, Natural Resources & Parks (Senate) - SHR 3, JACB - 1/31 @ 1:30pm

- SB 5145 - Exec Session - Concerning the use of hydraulic fracturing in the exploration for and production of oil and natural gas.

Bill Tracking Summary

Bill Details		Status	Sponsor	Priority	Position
HB 1070 **(SB 5108)**	**Natural gas tax treatment** Concerning the tax treatment of renewable natural gas. *Summary:* Provides a public utility tax exemption on the sale by a gas distribution business of renewable natural gas. States that the sale of natural gas, including compressed natural gas and liquefied natural gas used or sold to manufacture transportation fuel, and renewable natural gas by a gas distribution business, are not exempt from business and occupation taxes under certain circumstances.	H ENVIDP	Mosbrucker	Monitoring	Neutral
HB 1102 **(SB 5134)**	**Capital budget 2019-2021** Concerning the capital budget. *Summary:* Funds capital projects.	H Cap Budget	Tharinger	Monitoring	Neutral
HB 1108 **(SB 5154)**	**Supp. operating budget 17-19** Making 2017-2019 biennium second supplemental operating appropriations.	H Approps	Ormsby	Monitoring	Neutral

Summary: Makes 2017-2019 biennium second supplemental operating appropriations.

HB 1109 **(SB 5153)**	**Operating budget 2019-2021**	H Approps	Ormsby	High	Neutral
	Making 2019-2021 biennium operating appropriations. *Summary:* Makes 2019-2021 biennium operating appropriations.				
SHB 1110 **(SB 5412)**	**Greenhouse gas/transp. fuels**	H ENVIDPS	Fitzgibbon	Monitoring	Neutral
	Reducing the greenhouse gas emissions associated with transportation fuels. *Summary:*				
HB 1113	**Greenhouse emission limits**	H Env & Energy	Slatter	Medium	Concerns
	Amending state greenhouse gas emission limits for consistency with the most recent assessment of climate change science and with the United States' commitment under the 2015 Paris climate agreement. *Summary:* Reduces greenhouse gas emissions at a rate that is consistent with the intended nationally determined contribution submitted by the United States to the United Nations.				
HB 1126	**Distributed energy**	H Env & Energy	Morris	Monitoring	Neutral
	Enabling electric utilities to prepare for the distributed energy future. *Summary:* Declares that the policy of the state, that a distributed energy resources planning process engaged in by an electric utility, should accomplish the following: (1) Identify the data gaps that impede a robust planning process as well as any upgrades; (2) Propose monitoring, control, and metering upgrades; (3) Identify potential programs and tariffs to fairly compensate customers for the value of their distributed energy resources; (4) Forecast the growth of distributed energy resources on the utility's distribution system; (5) Provide a ten-year plan for distribution system investments and an analysis of nonwires alternatives for major transmission and distribution investments; and (6) Include the distributed energy resources in the plan in the utility's integrated resource plan. Requires the legislature to, by January 1, 2023, conduct an initial review of the state's policy pertaining to distributed energy resources planning.				
HB 1127	**Transp. electrification**	H Env & Energy	Morris	Medium	Concerns
	Concerning the electrification of transportation. *Summary:* Authorizes the governing authority of an electric utility, formed under chapter 35.92 RCW (municipal utilities), and the commission of a public utility district to adopt a transportation electrification plan. Requires the department of commerce to arrange for a study of utility capital expenditures projected to be driven by growth in distributed resources, including photovoltaic systems, electric vehicles, and other customer-owned technologies identified as likely to cause a shift in capital expenditures. Requires the study to survey each of the state's utilities and include a low and high adoption scenario for each resource. Provides that this act is null and void if appropriations are not approved.				
HB 1128	**Electric & nat gas companies**	H Env & Energy	Morris	Medium	Concerns
	Authorizing an alternative form of regulation of electrical and natural gas companies. *Summary:* Authorizes the utilities and transportation commission to regulate an electrical or gas company by authorizing an alternative form of regulation. Requires electrical companies, gas companies, multistate electric companies, and/or the commission to use the greenhouse gas planning				

adder under certain circumstances.

HB 1129

Customer-sited electricity | H Env & Energy | Morris | Monitoring | Neutral

Concerning customer-sited electricity generation.

Summary: Authorizes an electric utility to: (1) Offer to make net metering available to eligible customer-generators with large net metering systems or small net metering systems; (2) Offer an alternative to net metering for customer-generators with large net metering systems or small net metering systems in all or certain increments of the utility's distribution system; and (3) Use net metering credits to assist qualified low-income residential customers of the electric utility in paying their electricity bills. Places responsibility on a customer-generator for the purchase of a production meter and software if it is required by the electric utility to provide meter aggregation. Requires customer billings issued by certain light or power businesses or gas distribution businesses to include the total amount of kilowatt-hours of electricity consumed for the most recent twelve-month period.

HB 1211
(SB 5116)

Clean energy | H Env & Energy | Tarleton | High | Concerns

Supporting Washington's clean energy economy and transitioning to a clean, affordable, and reliable energy future.

Summary: Establishes the Washington clean energy transformation act. Addresses the elimination of coal-fired electricity and the transition of the state's electricity supply to one hundred percent carbon neutral by 2030. Provides that it is the policy of the state that all retail sales of electricity to the state's customers be greenhouse gas neutral by January 1, 2030. Requires the department of commerce to convene an energy and climate policy advisory committee to develop recommendations to the legislature for the coordination of existing resources, or the establishment of new ones, to: (1) Examine the costs and benefits of energy-related policies, programs, functions, activities, and incentives; and (2) Conduct other energy-related studies and analyses as may be directed by the legislature. Requires the department of health to conduct a cumulative impact analysis to designate the communities highly impacted by fossil fuel pollution and climate change.

HB 1226

Clean energy | H Env & Energy | DeBolt | Medium | Neutral

Encouraging investment in and reducing the costs of transitioning to the clean energy future.

Summary: Establishes the carbon free Washington act. Reduces the cost of transitioning to electric generation sources that have very low or zero carbon dioxide emissions. Provides sales and use tax preferences to reduce the cost to ratepayers of constructing and operating new renewable energy generation capacity equal to or greater than necessary to serve projected electricity load growth. Repeals chapter 19.285 RCW (the energy independence act) and provides a contingent effective date for the repeal.

HB 1232

Hydroelectricity/renewable | H Env & Energy | Griffey | Medium | Support

Recognizing hydroelectricity as an eligible renewable resource in the energy independence act.

Summary: Revises the definition of "eligible renewable resource," for purposes of the energy independence act, to include electricity from a generation facility powered by water that commenced operation before March 31, 1999, where the facility is located in the Pacific Northwest.

HB 1257
(SB 5293)

Energy efficiency | H Env & Energy | Doglio | Monitoring | Concerns

Concerning energy efficiency.

Summary: Increases energy efficiency and the use of renewable fuels that reduce the amount of greenhouse gas emissions in the state and provides a public utility tax credit against the taxes owing by utilities for the incentives provided for the implementation by eligible building owners of energy efficiency and renewable energy measures. Requires the department of commerce to: (1) Establish by

rule a state energy performance standard for covered commercial buildings; and (2) Establish a state energy performance standard early adoption incentive program. Requires each qualifying utility to administer incentive payments for the state energy performance standard early adoption incentive program. Allows a light and power business or a gas distribution business a public utility tax credit against certain taxes due. Requires each gas company to identify and acquire all conservation measures that are available and cost-effective. Requires the utilities and transportation commission to establish a schedule of annual minimum renewable natural gas acquisition targets for each gas company as a percentage of the company's total quantity sales to retail customers. Permits a city, town, or county to adopt additional residential energy code requirements as developed by the state building code council. Requires the state building code council to adopt certain optional efficiency appendices and include them in the state energy code for residential buildings.

HB 1332
(SB 5329)

Energy site eval. council | H Env & Energy | Wylie | Monitoring | Neutral

Concerning updating and streamlining energy facility site evaluation council operations.

Summary: Streamlines and updates the operations of the energy facility site evaluation council.

HB 1334
(SB 5305)

Electric util wildland fires | H RDev, Ag&NR | Blake | Monitoring | Neutral

Concerning electric utility wildland fire prevention.

Summary: Requires the commissioner of public lands to convene a utility wildland fire prevention task force with electrical power distribution utilities, and requires the task force to advise the department of natural resources on certain issues including electric utility wildland fire prevention.

HB 1512

Transp. electrification | H Env & Energy | Fey | Medium | Concerns

Concerning the electrification of transportation.

Summary:

HB 1549
(SB 5561)

Greenhouse emissions eval. | H Env & Energy | Blake | Monitoring | Neutral

Directing the department of ecology to adopt a rule governing the evaluation of greenhouse gas emissions under chapter 43.21C RCW.

Summary:

HB 1597

Greenhouse gas/fossil fuels | H Env & Energy | Pollet | Monitoring | Neutral

Incorporating comprehensive measurements of greenhouse gas emissions from certain fossil fuels into state environmental laws.

Summary:

HB 1625

Utility rate making/property | H Env & Energy | Fitzgibbon | Medium | Support

Clarifying the valuation and determination of used and useful property for rate making purposes.

Summary:

HB 1642

On-bill repayment programs | H Env & Energy | Doglio | Monitoring | Neutral

Allowing the energy savings associated with on-bill repayment programs to count toward a qualifying utility's energy conservation targets under the energy independence act.

Summary:

Bill	Title	Committee	Sponsor	Priority	Position
HB 1664 (SB 5336)	**Electric transportation** Advancing electric transportation. *Summary:*		Slatter	Monitoring	Neutral
HJM 4000 (SJM 8005)	**Biochar** Supporting the continued research, development, production, and application of biochar from our forests and agricultural lands. *Summary:* Supports the continued research, development, production, and application of biochar from our forests and agricultural lands.	H RDev, Ag&NR	Shea	Monitoring	Neutral
SB 5108 (HB 1070)	**Natural gas tax treatment** Concerning the tax treatment of renewable natural gas. *Summary:* Provides a public utility tax exemption on the sale by a gas distribution business of renewable natural gas. States that the sale of natural gas, including compressed natural gas and liquefied natural gas used or sold to manufacture transportation fuel, and renewable natural gas by a gas distribution business, are not exempt from business and occupation taxes under certain circumstances.	S Environment, E	King	Monitoring	Neutral
SB 5116 (HB 1211)	**Clean energy** Supporting Washington's clean energy economy and transitioning to a clean, affordable, and reliable energy future. *Summary:* Establishes the Washington clean energy transformation act. Addresses the elimination of coal-fired electricity and the transition of the state's electricity supply to one hundred percent carbon neutral by 2030. Provides that it is the policy of the state that all retail sales of electricity to the state's customers be greenhouse gas neutral by January 1, 2030. Requires the department of commerce to convene an energy and climate policy advisory committee to develop recommendations to the legislature for the coordination of existing resources, or the establishment of new ones, to: (1) Examine the costs and benefits of energy-related policies, programs, functions, activities, and incentives; and (2) Conduct other energy-related studies and analyses as may be directed by the legislature. Requires the department of health to conduct a cumulative impact analysis to designate the communities highly impacted by fossil fuel pollution and climate change.	S Environment, E	Carlyle	High	Concerns
SB 5118	**Self-generated electricity** Concerning the right to consume self-generated electricity. *Summary:* Prohibits an electric utility from establishing compensation arrangements or interconnection requirements, other than those permitted in chapter 80.60 RCW (net metering of electricity), for a customer-generator that would have the effect of limiting the ability of a customer-generator to generate or store electricity for consumption on its premises.	S Rules 2	Palumbo	Monitoring	Neutral
SB 5129 (HB 1343)	**Revenue** Increasing revenues for the support of state government. *Summary:* Imposes a tax on individuals for the privilege of selling or exchanging long-term capital assets or receiving Washington capital gains. Allows a business and occupation tax deduction against a person's gross income of the business to the extent necessary to avoid taxing the same amounts under chapter 82.04 RCW and section 102 of this act. Authorizes the department of revenue to enter into	S Ways & Means	Rolfes	Monitoring	Concerns

	reciprocal tax collection agreements with the taxing officials of any other state imposing a specified tax. Increases the business and occupation tax rate on certain services.				
SB 5134 (HB 1102)	**Capital budget 2019-2021** Concerning the capital budget. *Summary:* Funds capital projects.	S Ways & Means	Frockt	Monitoring	Neutral
SB 5145	**Hydraulic fracturing** Concerning the use of hydraulic fracturing in the exploration for and production of oil and natural gas. *Summary:* Prohibits the use of hydraulic fracturing in the exploration for and production of oil and natural gas.	S Ag/Water/Natur	Salomon	Monitoring	Neutral
SB 5153 (HB 1109)	**Operating budget 2019-2021** Making 2019-2021 biennium operating appropriations. *Summary:* Makes 2019-2021 biennium operating appropriations.	S Ways & Means	Rolfes	High	Neutral
SB 5154 (HB 1108)	**Supp. operating budget 17-19** Making 2017-2019 biennium second supplemental operating appropriations. *Summary:* Makes 2017-2019 biennium second supplemental operating appropriations.	S Ways & Means	Rolfes	Medium	Neutral
SB 5191 (HB 1222)	**PUD contracting** Concerning public utility districts' contracts for work or materials. *Summary:* Addresses a public utility district's contracts for work or materials.	S Local Governmen	Takko	Monitoring	Neutral
SB 5214 (HB 1160)	**Transportation budget 19-21** Making transportation appropriations for the 2019-2021 fiscal biennium. *Summary:* Makes transportation appropriations for the 2019-2021 fiscal biennium.	S Transportation	Hobbs	Monitoring	Neutral
SSB 5223	**Electrical net metering** Concerning net metering. *Summary:*	S Ways & Means	Palumbo	Monitoring	Neutral
SB 5293 (HB 1257)	**Energy efficiency** Concerning energy efficiency. *Summary:* Increases energy efficiency and the use of renewable fuels that reduce the amount of greenhouse gas emissions in the state and provides a public utility tax credit against the taxes owing by utilities for the incentives provided for the implementation by eligible building owners of energy efficiency and renewable energy measures. Requires the department of commerce to: (1) Establish by rule a state energy performance standard for covered commercial buildings; and (2) Establish a state	S Environment, E	Carlyle	Monitoring	Concerns

energy performance standard early adoption incentive program. Requires each qualifying utility to administer incentive payments for the state energy performance standard early adoption incentive program. Allows a light and power business or a gas distribution business a public utility tax credit against certain taxes due. Requires each gas company to identify and acquire all conservation measures that are available and cost-effective. Requires the utilities and transportation commission to establish a schedule of annual minimum renewable natural gas acquisition targets for each gas company as a percentage of the company's total quantity sales to retail customers. Permits a city, town, or county to adopt additional residential energy code requirements as developed by the state building code council. Requires the state building code council to adopt certain optional efficiency appendices and include them in the state energy code for residential buildings.

SB 5329 **(HB 1332)**	**Energy site eval. council**	S Environment, E	Nguyen	Monitoring	Neutral

Concerning updating and streamlining energy facility site evaluation council operations.

Summary: Streamlines and updates the operations of the energy facility site evaluation council.

SB 5336	**Electric transportation**	S Environment, E	Palumbo	Medium	Concerns

Advancing electric transportation.

Summary: Provides a sales and use tax exemption on electric vehicles. Requires the department of ecology to adopt the zero emission vehicle program regulations contained in Title 13, section 1962, 1962.1, and 1962.2 of the California Code of Regulations. Declares an intent to provide clear authority for utilities to engage in and promote the build out of electric vehicle infrastructure. Requires utilities that are traditionally responsible for providing electric service to customers and for understanding and engineering the electrical grid for safety and reliability to be engaged in the electrification of the transportation system. Authorizes certain cities or towns that are engaged in the generation, sale, or distribution of energy to, for its customers: (1) Assist in financing materials and equipment for the electrification of transportation; and (2) Offer programs, services, or investments in the electrification of transportation in a way that benefits ratepayers. Permits an electric utility to submit an electrification of transportation plan, to the utilities and transportation commission, that deploys electric vehicle supply equipment or provides other electric transportation programs, services, or incentives to support electrification of transportation. Creates the electric vehicle account.

SB 5347	**Electric utilities/climate**	S Environment, En	Ericksen	Monitoring	Neutral

Concerning claims about climate change made by electric utilities.

Summary: Prohibits an electric utility from advertising or offering a benefit, program, or service in terms indicating that the benefit, program, or service will slow or stop, or in any similar way affect, climate change.

SB 5561 **(HB 1549)**	**Greenhouse emissions eval.**	S Environment, E	Takko	Monitoring	Neutral

Directing the department of ecology to adopt a rule governing the evaluation of greenhouse gas emissions under chapter 43.21C RCW.

Summary:

SB 5629	**Small modular reactors**	S Environment, E	Brown	Monitoring	Neutral

Promoting small modular reactors in Washington.

Summary:

	Biochar	S Ag/Water/Natur	Short	Monitoring	Neutral
[SJM 8005](#) **(HJM 4000)**	Supporting the continued research, development, production, and application of biochar from our forests and agricultural lands. *Summary:* Supports the continued research, development, production, and application of biochar from our forests and agricultural lands.				
	DAVID DANNER	S Rules 2		Monitoring	Neutral
[SGA 9253](#)	*Summary:* DAVID DANNER, reappointed January 02, 2019, for a term ending January 01, 2025, as Chair of the Utilities and Transportation Commission.				

From: John Carr <jcarr@awec.solutions>

Sent time: 02/13/2019 11:13:25 AM

To: scott.kennedy@kaisertwd.com; Eric Fuller <efuller@precastcorp.com>; Eric Streicher <Eric.Streicher@airgas.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Rick Stricker <rstricker@baf.com>; Leslie Adams <adamsla@airproducts.com>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Pat Lydon <plydon@lhs.org>; Pat Ealy <pat.ealy@akzonobel.com>; Mitch Maynard <Mmaynard@deltaenergyllc.com>; Tim Root <Timothy.Root@axiall.com>; Drew Bryck <drew.m.bryck@boeing.com>; David Elliot <davidelliott@boisebuilding.com>; Chris Horn <chris_h@columbiasteel.com>; David Clemens <david.clemens@darigold.com>; John Bob <John.Bob@am.dynonobel.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Michael Slatterly <michael.slattery@evrazna.com>; Rob Freres <rtfreres@frereslumber.com>; Aldis Raisters <Aldis.Raisters@gapac.com>; Joseph Burrell <Joseph.g.burrell@jci.com>; Don Sturtevant <don.sturtevant@simplot.com>; Kevin Rasler <kevin_rasler@iepco.com>; Mart Sedler <marty.sedler@intel com>; Jena Hackett <Jena.Hackett@ipaper.com>; Trudy Slagle <Trudy.Slagle@lambweston.com>; Steven Castracane <steven.castracane@linde.com>; Jim Stanton <jstanton@microsoft.com>; Nick Kaiser <Nick.Kaiser@nippondynawave.com>; Mark Steele <steele@norpac.com>; Skylar Mlasko <Skyler.Mlasko@northwesthardwoods.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Noel Mak <Noel.Mak@atimetals.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Phil Foss <phil.foss@onsemi.com>; Clay Riding <clayr@nw-iw.com>; Chad Sorber <sorber@ohsu.edu>; Ken Johnson <ken.johnson@recsilicon.com>; Matt Ruckwardt <mruckwardt@schn.com>; Bill Gilmore <billmg@penwool.com>; Stan Jackson <S.Jackson@shell.com>; Marcie Peters <marcie.peters@solvay.com>; Nick Avenetti <nick@perlite.com>; David Jones <david.jones@swansongroup.biz>; Brown Mark POM <Mark.Brown@teck.com>; David A Barge <David.A.Barge@marathonpetroleum.com>; Sarah Schack <sschack@timberproducts.com>; Tony Hardenbrook; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <[redacted]>; Daryll Fuentes <dfuentes@usg.com>; Kelly Francone <kfrancone@energystrat.com>

Cc: John Carr <jcarr@awec.solutions>; Ed Finklea <efinklea@awec.solutions>

Subject: UPDATE: AWEC Members' Positive Contributions to Carbon Reduction

---

Greetings AWEC Members,

It has come to my attention that the original request for carbon reduction data was sent from my previous ICNU email. Please respond to THIS AWEC email so that your response does not get lost. I appreciate your attention to this matter.

AWEC members face significant risk from the carbon emission and greenhouse gas initiatives that continue to be on the forefront of the Oregon and Washington administrations and legislatures. We believe it is time to update our members' collective work on reducing energy usage and emissions, the dollars invested, and the resulting GHG reductions.

The energy cost implications of potential carbon policies to industry in the Northwest are literally hundreds of millions of dollars. We believe AWEC should respond with as positive of a message as possible regarding what our members are doing on their own to reduce their carbon footprint.

Based on that observation, I would ask each of you to send me a summary of steps (accomplishments) your company has taken in the last five years to improve the energy efficiency of your processes and to reduce your carbon footprint in Oregon and Washington. I suspect some of you have appreciably reduced your carbon footprint in the last few years, or possibly achieved carbon-neutrality.

Rest assured we will only use this information in aggregate form.

Specifically, we are requesting:

Total dollars invested;

Electric (kWH) and /or natural gas (MMBTu) energy saved, from energy efficiency projects;

Quantity of CO_2 emissions reduced:

Process improvements resulting in fewer emissions from combusted fossil fuels; and

Investments in renewable energy at your facilities or green power purchases.

Please include the number of employees at each of your facilities in both states as those numbers are useful in our work at the legislature.

If the information is already easily accessible at your website, feel free to send us the link to the appropriate page or pages.

Send me your information by Friday, February 22nd.

Once we have your collective information, we'll add it to the AWEC website. We will also develop handouts that can be used with legislators and others.

With best regards,

John

--

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell:
Website: http://www.awec.solutions
E-mail: jcarr@awec.solutions

From: John Carr <jcarr@awec.solutions>

Sent time: 02/04/2019 10:39:50 AM

To: Aldis Raisters <Aldis.Raisters@gapac.com>; Alex Koleber; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamaee <bmcnamee@timberproducts.com>; Beth Beatty <beth@cmsnaturalgas.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Bill Gillmore <billmg@penwool.com>; Bill Smith <Bill.Smith@airliquide.com>; Brad Beavers <bbeavers@timberproducts.com>; Brad Van Cleve <bvc@dvclaw.com>; Brian Wood <brian.wood@nippondynawave.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <[redacted]>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Chad Sorber <sorber@ohsu.edu>; Chad Stokes <cstokes@cablehuston.com>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <Chris_h@columbiasteel.com>; Chris Ingram <chris.ingram@recsilicon.com>; Chuck Gates <[redacted]; Clay Riding <clayr@nw-iw.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Courtney Smith <courtney.smith@shell.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leone <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Daniel Riley <daniel.t.riley@tsocorp.com>; Daryll Fuentes <dfuentes@usg.com>; Dave Post <Dave.Post@wahchang.com>; David A Barge <DABarge@marathonpetroleum.com>; David Clemens <david.clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; David Mitcheltree <DBM@eesconsulting.com>; David Tobin <DavidTobin@boisepaper.com>; Dean Gallinger <dean.m.gallinger@boeing.com>; Delee Shoemaker <delees@microsoft.com>; Desiree Higgins; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <don.sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Betzold <CMS@cmsnaturalgas.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <Drew.m.bryck@boeing.com>; Drew Gilpin <Drew.Gilpin@evrazna.com>; Ed Coghlan <Ed.coghlan@onsemi.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@pccstructurals.com>; Eric Streicher <Eric.Streicher@airgas.com>; Fawn Barrie <fbarrie@legadv.com>; Gary Collison <gcollison@pccstructurals.com>; Gary Londo <gary.j.londo@boeing.com>; Hugh Pierce <Hugh.O.Pierce@tsocorp.com>; Irene Plenefisch <irenep@microsoft.com>; Jake Evans <Jake.evans@onsemi com>; James Clarken <James_Clarken@oxy.com>; James Price <JaDPrice@gapac.com>; Janese Pierson <Janese.Pierson@ipaper.com>; Jared Sommer <sommerj@byui.edu>; Jasmin Simmons <JAMIN.SIMMONS@resolutefp.com>; Jason Hakes <jason.c.hakes@intel.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jeff Steed <jeff.steed@northwesthardwoods.com>; Jena Hackett <Jena.Hackett@ipaper.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jenny Dresler <jenny@pacounsel.org>; Jim Duke <jduke@idahoan.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; Joe Burrell <Joseph.g.burrell@jci.com>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell.com>; Josh D. Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Justin Pino <jpino@uetllc.com>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Kelly Francone <kfrancone@energystrat.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Kristin Marshall <kristin.b.marshall@boeing.com>; Kyle England <Kyle.England@kaisertwd.com>; Kyle Williams <williamsk@byui.edu>; Larry Voos <larry.voos@norpacpaper.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Leslie Adams <adamsla@airproducts.com>; Lori Evans <lori@lorievans.us>; Marcie Peters <marcie.peters@solvay.com>; Mark Brown <Mark.Brown@teck.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Martha Cox <Martha_C@columbiasteel.com>; Marty Sedler <marty.sedler@intel.com>; Mary Catherine McAleer <marycatherine.mcaleer@weyerhaeuser.com>; Mary McCordic <mary.mccordic@shell.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <Matt.Upmeyer@lambweston.com>; Melissa Gomboskey <[redacted]; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <mkuhn@westrock.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Nancy Richardson <Nancy.richardson@bp.com>; Nick Avenetti <nick@perlite.com>; Nick Kaiser <nick.kaiser@lvpnp.com>; Noel Mingo <mingon@ohsu.edu>; Ortiz, Patrick W <patrick.ortiz@westrock.com>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <plydon@lhs.org>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Paul Langley; Phil Pesek <Phil.Pesek@teck.com>; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Schultz <randy.schultz@bp.com>; Richard Greenwell <rgreenwell@uetllc.com>; Richard White <richard.a.white7@boeing.com>; Rick Harper <[redacted]; Rick Kunz <rick.kunz@shell.com>; Rick Stricker <rstricker@baf.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Robert Pierce <Robert.pierce@shell.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Rusty Williams <williwk@bp.com>; Ryan Beaver <Ryan.beaver@weyerhaeuser.com>; Sam Liebelt <samuel.liebelt@westrock.com>; Sam Merrick <merricks@byui.edu>; Samantha Julian <Samanthaj@pacounsel.org>; Sarah Schack <sschack@timberproducts.com>; Scott Edgar <Edgar.Scott@kaiseraluminum.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <SRHawley@marathonpetroleum.com>; Sharon Andersen <Sharon.w.anderson@intel.com>; Skyler Mlasko <Skyler.Mlasko@northwesthardwoods.com>; Spiro Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steve O'Brien <sobrien@baf.com>; Steven Castracane <steven.castracane@linde.com>; Teresa Acosta <teresa.acosta@calpinesolutions.com>; Tim Boyd <[redacted]>; Tim Root <Timothy.Root@axiall.com>; Todd Wiseman <todd.wiseman@solvay.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tom Rozwood <tom.rozwod@norpacpaper.com>; Tom Yarborough <tom@richlandpaper.com>; Tommy Brooks <tbrooks@cablehuston.com>; Tony Hardenbrook; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; Willaim McSherry <william.mcsherry@boeing.com>

Subject: AWEC Oregon Weekly Legislative Update - Feb 4, 2019

Attachments: AWEC Oregon Legislative Update February 4, 2019.docx

---

AWEC Members,

Please find attached the weekly legislative update from our Oregon lobbyists at PAC Counsel.

Regards,

John

--

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell:
Website: http://www.awec.solutions
E-mail: jcarr@awec.solutions

Oregon Weekly Report

February 4, 2019

The Oregon legislature wrapped up week number two. This week, LC 894, the cap-and-trade bill, was released. Legislation will be first read next week and has already been assigned a bill number, House Bill 2020. This kickstarts the long-awaited debate over cap-and-trade in Oregon. Republican legislators are pushing for hearings in communities across the state and complaining that they and consumers have been left out of the crafting of the bill. Introduction of the bill kicks off discussion on what is likely to be the most controversial issue of the 2019 legislative session.

What Happened this Week at the Oregon Capitol

- **Carbon:** On Friday, the Joint Committee on Carbon Reduction met. LC 894 was introduced by the committee. Senator Bentz and Senator Girod opposed introduction of the bill concept. Legislative Counsel walked through the bill, providing a section-by-section analysis and answered legislators' technical questions. Legislative Counsel stated that the bill is not a revenue raising measure, and therefore it can be passed by a simple majority of legislators in each chamber. The bill will be introduced in the House next week and will be HB 2020.

  AWEC is analyzing the bill and the potential impacts it will have on member companies and will have material available as soon as possible.

  Helpful Links: A summary of the bill was provided by the Carbon Policy Office. The Carbon Policy Office also has additional information posted on the proposal.

  - Carbon Policy Office Link: https://www.oregon.gov/gov/pages/carbonpolicy_index.aspx
  - Carbon Bill Summary Link: https://www.oregon.gov/gov/Documents/OregonClimateActionProgram_CoreElementsSummary.pdf

- **Work Session on SB 38:** This week, the Senate Committee on Environment and Natural Resources passed SB 38 out of committee. This measure clarifies that thermal energy RECs can be applied toward RPS compliance. Thermal energy would have the same requirements as electric generation under SB 38. The bill is now scheduled for a floor vote in the Senate.

- **OPUC Fee Increase:** AWEC submitted written testimony in support of the Oregon Public Utility Commissions' budget bill, SB 5534. The PUC seeks an increase in the annual utility fee from 0.30

percent of a utility's gross operating revenue to a maximum of 0.45 percent for energy and water utilities. Funding will help address staffing levels needed for the PUC to do their job and maintain experienced staff. No further action is scheduled at this point.

- **Social Equity and Electricity Rates (HB 2242):** The House Committee on Energy and Environment held a second public hearing on HB 2442 this week. The PUC believes that they lack the authority to provide bill discounts and other assistance to low-income customers, which happens in other states. The bill attempts to address this issue by giving the PUC more powers that would require them to consider things like differential energy burdens, social equity, and environmental justice. The bill would also create a new position for a low-income and "environmental justice" advocate within the PUC to have permanent standing to intervene on behalf of low-income customers and the "environmental justice" community. The term "environmental justice" is not defined in the legislation. AWEC is watching this legislation carefully as it could result in cost-shifting of rates to large energy users.

<u>What's Going on Next Week</u>

- **Carbon:** The Joint Committee on Carbon Reduction cancelled this Monday's carbon hearing in order to give committee members time to study and absorb the new cap-and-trade legislation. On Friday, February 8th, the committee will release and review the BEAR economic report. The first panel of invited organizations will testify on House Bill 2020 at that hearing, including AWEC's Ed Finklea. The following Monday, February 11th, the committee will hear more from invited panelists, including impacted industrial facilities. The first public hearing on the bill concept will be held on February 15th.

- **Senate Environment and Natural Resources:** On Thursday, the Senate Environment and Natural Resources Committee will hold a public hearing on Senate Bill 98. That bill would require the PUC to adopt by rule a voluntary renewable gas program for natural gas utilities. AWEC is tracking this legislation carefully and plans to testify. AWEC is concerned the legislation could enable natural gas utilities to recoup costs from ratepayers for renewable gas generation infrastructure. AWEC has shared its concerns with NW Natural in previous meetings.

- **House Energy and Environment:** The House will hold an informational hearing on a Senate Bill 978 report. The report focuses on actively adapting to the changing energy sector. Megan Decker, Chair of the Oregon Public Utility Commission, and Julie Peacock, Director of Policy, for the PUC will present.

Bills AWEC is Tracking

Alliance of Western Energy Consumers

HB 5044	Position	Priority
Bill Info	Oppose	1

Summary: Appropriates moneys from General Fund to Oregon Climate Authority for biennial expenses. Limits biennial expenditures from fees, moneys or other revenues, including Miscellaneous Receipts, but excluding lottery funds and federal funds, collected or received by authority. Limits biennial expenditures by authority from certain lottery moneys. Limits biennial expenditures by authority from federal funds. Authorizes specified nonlimited expenditures. Declares emergency, effective July 1, 2019.

1/23/19 H - Assigned to Subcommittee On Natural Resources.

1/15/19 H - Referred to Ways and Means.

1/14/19 H - First reading. Referred to Speaker's desk.

SB 0089	Position	Priority
Bill Info	Oppose	1

Summary: Requires Environmental Quality Commission to adopt by rule program for assessing net impacts of state policies and programs for reducing greenhouse gas emissions. Declares emergency, effective on passage.

1/15/19 S - Referred to Environment and Natural Resources.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0098	Position	Priority
Bill Info	Monitor	1

Summary: Requires Public Utility Commission to adopt by rule renewable natural gas program for natural gas utilities to recover prudently incurred qualified investments in meeting certain targets for including renewable natural gas in gas purchases for distribution to retail natural gas customers. Requires commission to adopt rules no later than December 31, 2019. Takes effect on 91st day following adjournment sine die.

2/7/19 S - Public Hearing Scheduled.

1/28/19 S - Recommendation: Without recommendation as to passage and be returned to President's desk for referral. Referred to Environment and Natural Resources by order of the President.

1/25/19 S - Work Session held.

1/17/19 S - Referred to Carbon Reduction.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0220	Position	Priority
Bill Info	Oppose	1

Summary: Requires Department of Environmental Quality to conduct study related to greenhouse gas emissions. Sunsets January 2, 2022.

1/15/19 S - Referred to Environment and Natural Resources.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0598	Position	Priority
Bill Info	Oppose	1

Summary: Changes name of Oregon Global Warming Commission to Oregon Climate Change Commission. Requires commission to appoint executive director. Appropriates moneys to commission for purposes related to executive director of commission. Modifies certain duties of commission and of certain nonvoting members of commission. Modifies certain duties of certain agencies of state government with regard to duties of commission.

1/17/19 S - Referred to Environment and Natural Resources.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0636	Position	Priority
Bill Info	Monitor	1

Summary: Requires Public Utility Commission to adopt by rule renewable natural gas program for natural gas utilities to recover prudently incurred qualified investments in meeting certain targets for including renewable natural gas in gas purchases for distribution to retail natural gas customers. Requires commission to adopt rules no later than December 31, 2019. Takes effect on 91st day following adjournment sine die.

1/25/19 S - Referred to Environment and Natural Resources.

1/22/19 S - Introduction and first reading. Referred to President's desk.

[HB 2093]	**Position**	**Priority**
[Bill Info]	Monitor	2

Summary: Permits Oregon Department of Administrative Services to contract with other entity, and to participate in, sponsor, conduct or administer cooperative procurements, for purpose of acquiring, installing, maintaining or operating devices or facilities to deliver electricity to public for electric motor vehicles. Specifies that solely for purpose of contracting agency's participating in, sponsoring, conducting or administering cooperative procurement, device or facility for delivering electricity to public for electric motor vehicles is not public improvement. Becomes operative on January 1, 2020. Takes effect on 91st day following adjournment sine die.

1/28/19	H - Public Hearing held.
1/15/19	H - Referred to Rules.
1/14/19	H - First reading. Referred to Speaker's desk.

[HB 2242]	**Position**	**Priority**
[Bill Info]	Monitor	2

Summary: Authorizes Public Utility Commission to consider differential energy burden and other inequities of affordability in rates. Authorizes public utilities to enter agreements to provide financial assistance for organizations to represent in regulatory proceedings before commission interests of low-income customers and customers that are members of environmental justice communities. Establishes Office of the Low-Income and Environmental Justice Advocate within commission. Authorizes office to intervene in certain proceedings. Directs commission to establish public process for investigating ways to address and mitigate differential energy burdens on classes of electric company customers and other inequities of affordability. Requires commission to report findings to interim committees of Legislative Assembly related to energy and business no later than September 15, 2020. Sunsets public process January 2, 2021.

1/31/19	H - Public Hearing held.
1/15/19	H - Referred to Energy and Environment with subsequent referral to Ways and Means.
1/14/19	H - First reading. Referred to Speaker's desk.

HB 2322	Position	Priority
Bill Info	Monitor	2

Summary: Requires Land Conservation and Development Commission to amend statewide land use planning goals related to energy to incorporate development of renewable energy facilities and reduction of greenhouse gas emissions and to match state energy policies.

1/18/19	H - Referred to Energy and Environment.
1/14/19	H - First reading. Referred to Speaker's desk.

HB 2329	Position	Priority
Bill Info	Monitor	2

Summary: Modifies definition of "energy facility" for purposes of regulation of energy facilities by Energy Facility Siting Council. Broadens provisions for types of electric power generating plants that may elect to obtain site certificate from council if otherwise not required to obtain site certificate.

1/18/19	H - Referred to Energy and Environment.
1/14/19	H - First reading. Referred to Speaker's desk.

HB 2494	Position	Priority
Bill Info	Monitor	2

Summary: Extends operation of public purpose charges until January 1, 2036.

1/18/19 H - Referred to Energy and Environment.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2611	**Position**	**Priority**
Bill Info	Support	2

Summary: Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.

1/18/19 H - Referred to Energy and Environment.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2618	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Requires State Department of Energy to adopt by rule program for providing rebates for purchase, construction or installation of residential and commercial solar electric systems and paired solar and storage systems. Sets forth rebate limits under program. Establishes Rooftop Solar Incentive Fund. Continuously appropriates moneys in fund to department to issue rebates. Limits total amount of rebates issued annually for commercial systems. Appropriates moneys from General Fund to department for deposit in Rooftop Solar Incentive Fund. Requires department to submit annual report on program to Legislative Assembly. Sunsets January 2, 2024. Takes effect on 91st day following adjournment sine die.

1/15/19 H - Referred to Energy and Environment with subsequent referral to Ways and Means.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2791	Position	Priority
Bill Info	Monitor	2

Summary: Modifies cost recovery formula for site certificate holders. Applies to annual fees due on and after July 1, 2020. Establishes Energy Facility Siting Task Force. Sunsets task force on December 31, 2020. Declares emergency, effective on passage.

1/28/19 H - Referred to Energy and Environment with subsequent referral to Ways and Means.

1/24/19 H - First reading. Referred to Speaker's desk.

HB 5017	Position	Priority
Bill Info	Monitor	2

Summary: Appropriates moneys from General Fund to Department of Environmental Quality for certain biennial expenses. Limits biennial expenditures from fees, moneys or other revenues, including Miscellaneous Receipts, specified bond proceeds and specified federal funds, but excluding lottery funds and other federal funds, collected or received by department. Limits biennial expenditures from lottery moneys allocated from Parks and Natural Resources Fund to department. Authorizes specified nonlimited expenditures. Limits certain biennial expenditures by department from federal funds. Declares emergency, effective July 1, 2019.

1/23/19 H - Assigned to Subcommittee On Natural Resources.

1/15/19 H - Referred to Ways and Means.

1/14/19 H - First reading. Referred to Speaker's desk.

SB 0038	Position	Priority
Bill Info	Support	2

Summary: Modifies provisions for treatment of renewable energy certificates issued for generation of thermal energy.

1/31/19	S - Recommendation: Do pass.
1/31/19	S - Second reading.
1/29/19	S - Work Session held.
1/22/19	S - Public Hearing held.
1/15/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0068	Position	Priority
Bill Info	No Position	2

Summary: Increases annual fee imposed on public utilities and telecommunications providers for purpose of defraying costs of Public Utility Commission. Declares emergency, effective on passage.

1/31/19	S - Public Hearing and Work Session held.
1/15/19	S - Referred to Business and General Government.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0091	Position	Priority
Bill Info	Oppose	2

Summary: Requires at least 50 percent of public purpose charge funds paid to nongovernmental entity to be invested in providing incentives to retail electricity customers for accelerating transportation electrification. Specifies that accelerating transportation electrification qualifies as new market transformation effort for purposes of public purpose charge expenditure standard.

1/15/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0267 **Position** **Priority**

Bill Info Monitor 2

Summary: Transfers duties, functions and powers of State Department of Energy related to issuance of loans for small scale local energy projects to Oregon Business Development Department. Becomes operative on January 1, 2020. Requires loan contracts to make loans payable in full in event that Director of Oregon Business Development Department formally declares default of payment of loan or that project that is subject of loan fails to meet standards and criteria for projects. Becomes operative on January 1, 2020. Repeals certain provisions related to small scale local energy projects. Abolishes funds associated with provisions. Transfers moneys from abolished funds to Small Scale Local Energy Project Loan Fund. Appropriates moneys from General Fund to Oregon Business Development Department for purposes of Act. Repeals energy efficiency and sustainable technology loan program. Requires State Department of Energy to conduct audit of certain department activities. Declares emergency, effective on passage.

1/15/19 S - Referred to Environment and Natural Resources.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0451 **Position** **Priority**

Bill Info Monitor 2

Summary: Establishes eligibility for renewable energy certificates for facilities that generate electricity from direct combustion of municipal solid waste and became operational before January 1, 1995, if such facilities register with Western Renewable Energy Generation Information System at any time.

1/28/19 S - Recommendation: Without recommendation as to passage and be returned to President's desk for referral. Referred to Environment and Natural Resources by order of the President.

1/25/19 S - Work Session held.

1/17/19 S - Referred to Carbon Reduction.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0503	**Position**	**Priority**
Bill Info	Support	2

Summary: Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.

1/16/19 S - Referred to Environment and Natural Resources.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0508	**Position**	**Priority**
Bill Info	Support	2

Summary: Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.

1/16/19 S - Referred to Environment and Natural Resources.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 5534	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Limits certain biennial expenditures from fees, moneys or other revenues, including Miscellaneous Receipts, but excluding lottery funds and federal funds, collected or received by Public Utility Commission of Oregon. Limits biennial expenditures by commission from federal funds. Authorizes specified nonlimited expenditures. Declares emergency, effective July 1, 2019.

1/30/19 S - Public Hearing held.

1/23/19	S - Assigned to Subcommittee On Transportation and Economic Development.
1/15/19	S - Referred to Ways and Means.
1/14/19	S - Introduction and first reading. Referred to President's desk.

From: John Carr <jcarr@icnu.org>

Sent time: 02/12/2019 03:49:56 PM

To: rstricker@baf.com; scott.kennedy@kaisertwd.com; phil.foss@onsemi.com; Mark.Brown@teck.com; Eric Fuller <efuller@precastcorp.com>; Eric Streicher <Eric.Streicher@airgas.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Leslie Adams <adamsla@airproducts.com>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Pat Lydon <plydon@lhs.org>; Pat Ealy <pat.ealy@akzonobel.com>; Mitch Maynard <Mmaynard@deltaenergyllc.com>; Tim Root <Timothy.Root@axiall.com>; Drew Bryck <drew.m.bryck@boeing.com>; David Elliot <davidelliott@boisebuilding.com>; Chris Horn <chris_h@columbiasteel.com>; David Clemens <david.clemens@darigold.com>; John Bob <John.Bob@am.dynonobel.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Michael Slatterly <michael.slattery@evrazna.com>; Rob Freres <rtfreres@frereslumber.com>; Aldis Raisters <Aldis.Raisters@gapac.com>; Joseph Burrell <Joseph.g.burrell@jci.com>; Don Sturtevant <don.sturtevant@simplot.com>; Kevin Rasler <kevin_rasler@iepco.com>; Mart Sedler <marty.sedler@intel com>; Jena Hackett <Jena.Hackett@ipaper.com>; Trudy Slagle <Trudy.Slagle@lambweston.com>; Steven Castracane <steven.castracane@linde.com>; Jim Stanton <jstanton@microsoft.com>; Nick Kaiser <Nick.Kaiser@nippondynawave.com>; Mark Steele <steele@norpac.com>; Skylar Mlasko <Skyler.Mlasko@northwesthardwoods.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Noel Mak <Noel.Mak@atimetals.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Clay Riding <clayr@nw-iw.com>; Chad Sorber <sorber@ohsu.edu>; Ken Johnson <ken.johnson@recsilicon.com>; Matt Ruckwardt <mruckwardt@schn.com>; Bill Gilmore <billmg@penwool.com>; Stan Jackson <S.Jackson@shell.com>; Marcie Peters <marcie.peters@solvay.com>; Nick Avenetti <nick@perlite.com>; David Jones <david.jones@swansongroup.biz>; David A Barge <David.A.Barge@marathonpetroleum.com>; Sarah Schack <sschack@timberproducts.com>; Tony Hardenbrook; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <[redacted]>; Daryll Fuentes <dfuentes@usg.com>; Kelly Francone <kfrancone@energystrat.com>

Cc: John Carr <jcarr@awec.solutions>; Ed Finklea <efinklea@awec.solutions>

Subject: AWEC Members' Positive Contributions to Carbon Reduction

---

Greetings AWEC Members,

AWEC members face significant risk from the carbon emission and greenhouse gas initiatives that continue to be on the forefront of the Oregon and Washington administrations and legislatures. We believe it is time to update our members' collective work on reducing energy usage and emissions, the dollars invested, and the resulting GHG reductions.

The energy cost implications of potential carbon policies to industry in the Northwest are literally hundreds of millions of dollars. We believe AWEC should respond with as positive of a message as possible regarding what our members are doing on their own to reduce their carbon footprint.

Based on that observation, I would ask each of you to send me a summary of steps (accomplishments) your company has taken in the last five years to improve the energy efficiency of your processes and to reduce your carbon footprint in Oregon and Washington. I suspect some of you have appreciably reduced your carbon footprint in the last few years, or possibly achieved carbon-neutrality.

Rest assured we will only use this information in aggregate form.

Specifically, we are requesting:

Total dollars invested;

Electric (kWH) and /or natural gas (MMBTu) energy saved, from energy efficiency projects;

Quantity of CO2 emissions reduced:

Process improvements resulting in fewer emissions from combusted fossil fuels; and

Investments in renewable energy at your facilities or green power purchases.

Please include the number of employees at each of your facilities in both states as those numbers are useful in our work at the legislature.

If the information is already easily accessible at your website, feel free to send us the link to the appropriate page or pages.

Send me your information by Friday, February 22nd.

Once we have your collective information, we'll add it to the AWEC website. We will also develop handouts that can be used with legislators and others.

With best regards,

John

--

John Carr
Executive Director
Industrial Customers of Northwest Utilities
Office: 971.544.7169
Cell: [redacted]
Website: http://www.nwenergyusers.org

Email: jcarr@icnu.org

From: John Carr <jcarr@awec.solutions>

Sent time: 02/25/2019 09:14:52 AM

To: Aldis Raisters <Aldis.Raisters@gapac.com>; Alex Koleber; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bill Gillmore <billmg@penwool com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <[redacted]>; Calli Daly <calli.daly@kochps.com>; Chad Sorber <sorber@ohsu.edu>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <Chris_h@columbiasteel.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leone <cynthia.leon@ipaper.com>; Dave Post <Dave.Post@wahchang.com>; David Clemens <david.clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Tobin <DavidTobin@boisepaper.com>; Dean Gallinger <dean.m.gallinger@boeing.com>; Desiree Higgins; Don Hendricksen <donald.j.hendrickson@boeing.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <Drew.m.bryck@boeing.com>; Drew Gilpin <Drew.Gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@pccstructurals.com>; Eric Streicher <Eric.Streicher@airgas.com>; Gary Collison <gcollison@pccstructurals.com>; Gary Londo <gary.j.londo@boeing.com>; James Price <JaDPrice@gapac.com>; Jason Hakes <jason.c.hakes@intel.com>; Jeff Steed <jeff.steed@northwesthardwoods.com>; Jena Hackett <Jena.Hackett@ipaper.com>; Jenny Dresler <jenny@pacounsel.org>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; Josh D. Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Kelly Francone <kfrancone@energystrat.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Mark Dunn <mark.dunn@simplot.com>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Martha Cox <Martha_C@columbiasteel.com>; Marty Sedler <marty.sedler@intel.com>; Mary Catherine McAleer <marycatherine.mcaleer@weyerhaeuser.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <Matt.Upmeyer@lambweston.com>; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <mkuhn@westrock.com>; Michael Slattery <Michael.slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Nick Avenetti <nick@perlite.com>; Noel Mak <Noel.Mak@atimetals.com>; Pat Lydon <plydon@lhs.org>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac.com>; Richard White <richard.a.white7@boeing.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.beaver@weyerhaeuser.com>; Samantha Julian <Samanthaj@pacounsel.org>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <sgutting@energystrat.com>; Skyler Mlasko <Skyler.Mlasko@northwesthardwoods.com>; Spiro Xenos <spiro.e.xenos@boeing.com>; Steven Castracane <steven.castracane@linde.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tony Hardenbrook; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; Willaim McSherry <william.mcsherry@boeing.com>; Jeff Burks <jburks@energystrat.com>

Subject: AWEC Oregon Weekly Legislative Update

Attachments: AWEC Oregon Legislative Update February 25, 2019.docx Costs Impacts of OR Cap and Trade AWEC.pdf

---

Oregon AWEC members,

Please find attached the weekly legislative update from our Oregon lobbyists at PAC Counsel. Also attached is the Oregon cap-and-trade impact report developed by Energy Strategies.

Regards,

John

--

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell: [redacted]
Website: http://www.awec.solutions
E-mail: jcarr@awec.solutions

Oregon Weekly Report

February 25, 2019

The Oregon legislature wrapped up week number five. Legislators started the week with a public hearing at the capitol on cap-and-trade and then ended the week with two stops on the cap-and-trade roadshow: Springfield and Medford.

What Happened This Week at the Oregon Capitol

- **Carbon:** On Monday, the Joint Committee on Carbon Reduction held a public hearing at the state capitol. On Friday and Saturday, the committee traveled to Springfield and Medford, respectively, to hear from hundreds of Oregonians about the potential impacts of the cap-and-trade bill. Citizens packed the room for both roadshow stops and heard testimony from equal numbers of proponents and opponents.

  AWEC has compiled economic impacts of HB 2020 to AWEC members. See the analysis done by Energy Strategies that is included with this week's email and report.

What's Going on This Next Week

- **Carbon:** The Joint Committee on Carbon Reduction is scheduled to continue its series of "roadshow" stops to gather public input from around the state. While this is going on, alternative proposals and amendments are being drafted and worked on. It is indeterminant if the amendments will have a significant impact or provide the cost relief that AWEC members will need.

- Dates are scheduled as follow:

  - Remote testimony (via live video) is available on February 25 at the following times and locations:
    - **Baker City:** 5pm - 6pm - Baker County Fairgrounds, Event Center
    - **Newport:** 6pm - 7pm - OSU Lincoln County Extension Office, Thompson Conference Room

  - **The Dalles:** Friday, March 1, 12pm - 3pm – The Dalles Civic Auditorium, Community Room

- **Bend:** Saturday, March 2, 9am - 12pm – Central Oregon Community College, Cascade Hall, Room 246-248

- **Senate Environment and Natural Resources:** No bills relating to energy are on the schedule for this coming week.

- **House Energy and Environment:**
  - **HB 2242:** This is scheduled for a work session this week. We anticipate the bill will be moved down to the Joint Ways and Means Committee for further discussion and financial impacts the bill would have on the Public Utility Commission.

Bills AWEC is Tracking

Alliance of Western Energy Consumers

HB 2020	Position	Priority
Bill Info	Oppose	1

Summary: Establishes Carbon Policy Office within Oregon Department of Administrative Services and directs Director of Carbon Policy Office to adopt Oregon Climate Action Program by rule. Modifies statewide greenhouse gas emissions reduction goals. Establishes Joint Committee on Climate Action. Establishes purposes of Oregon Climate Action Program and provisions for investment of moneys received by state as proceeds from auctions conducted under program. Requires program to place cap on greenhouse gas emissions that are regulated emissions and provide market-based mechanism for covered entities to demonstrate compliance with program. Sets forth certain other requirements for program and for rules adopted by Director of Carbon Policy Office related to program. Establishes certain funds. Sets forth requirements for uses of moneys deposited in funds. Authorizes Public Utility Commission to allow rate or rate schedule to include differential rates or to reflect amounts for programs that enable public utilities to assist low-income residential customers. Transfers duties, functions and powers of Environmental Quality Commission and Department of Environmental Quality related to greenhouse gas reporting to Carbon Policy Office. Amends greenhouse gas reporting statute. Repeals Energy Facility Siting Council carbon dioxide emissions standards. Includes provisions for treatment of site certificate conditions affected by repeal of carbon dioxide emissions standards. Provides that provisions related to Carbon Policy Office, Oregon Climate Action Program, investment of certain moneys, Public Utility Commission, transfer of duties, and repeal of Energy Facility Siting Council carbon dioxide emissions standards become operative January 1, 2021. Provides for expedited review of certain questions on Act to Supreme Court upon petition by adversely affected party. Declares emergency, effective on passage.

3/2/19	H - Public Hearing scheduled.
3/1/19	H - Public Hearing scheduled.
2/25/19	H - Public Hearing scheduled.
2/23/19	H - Public Hearing scheduled.
2/22/19	H - Public Hearing scheduled.
2/18/19	H - Public Hearing held.
2/15/19	H - Public Hearing held.
2/11/19	H - Informational Meeting held.
2/8/19	H - Informational Meeting held.
2/4/19	H - First reading. Referred to Speaker's desk.
2/4/19	H - Referred to Carbon Reduction.

HB 5044 **Position** **Priority**

Bill Info Oppose 1

Summary: Appropriates moneys from General Fund to Oregon Climate Authority for biennial expenses. Limits biennial expenditures from fees, moneys or other revenues, including Miscellaneous Receipts, but excluding lottery funds and federal funds, collected or received by authority. Limits biennial expenditures by authority from certain lottery moneys. Limits biennial expenditures by authority from federal funds. Authorizes specified nonlimited expenditures. Declares emergency, effective July 1, 2019.

1/23/19	H - Assigned to Subcommittee On Natural Resources.
1/15/19	H - Referred to Ways and Means.
1/14/19	H - First reading. Referred to Speaker's desk.

SB 0089 **Position** **Priority**

Bill Info Oppose 1

Summary: Requires Environmental Quality Commission to adopt by rule program for assessing net impacts of state policies and programs for reducing greenhouse gas emissions. Declares emergency, effective on passage.

1/15/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0098 **Position** **Priority**

Bill Info Monitor 1

Summary: Requires Public Utility Commission to adopt by rule renewable natural gas program for natural gas utilities to recover prudently incurred qualified investments in meeting certain targets for including renewable natural gas in gas purchases for distribution to retail natural gas customers. Requires commission to adopt rules no later than December 31, 2019. Takes effect on 91st day following adjournment sine die.

2/7/19	S - Public Hearing held.
1/28/19	S - Recommendation: Without recommendation as to passage and be returned to President's desk for referral. Referred to Environment and Natural Resources by order of the President.
1/25/19	S - Work Session held.
1/17/19	S - Referred to Carbon Reduction.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0220	Position	Priority
Bill Info	Oppose	1

Summary: Requires Department of Environmental Quality to conduct study related to greenhouse gas emissions. Sunsets January 2, 2022.

1/15/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0598	Position	Priority
Bill Info	Oppose	1

Summary: Changes name of Oregon Global Warming Commission to Oregon Climate Change Commission. Requires commission to appoint executive director. Appropriates moneys to commission for purposes related to executive director of commission. Modifies certain duties of commission and of certain nonvoting members of commission. Modifies certain duties of certain agencies of state government with regard to duties of commission.

1/17/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0636	Position	Priority
Bill Info	Monitor	1

Summary: Requires Public Utility Commission to adopt by rule renewable natural gas program for natural gas utilities to recover prudently incurred qualified investments in meeting certain targets for including renewable natural gas in gas purchases for distribution to retail natural gas customers. Requires commission to adopt rules no later than December 31, 2019. Takes effect on 91st day following adjournment sine die.

1/25/19	S - Referred to Environment and Natural Resources.
1/22/19	S - Introduction and first reading. Referred to President's desk.

HB 2093 | **Position** | **Priority**

Bill Info Monitor 2

Summary: Permits Oregon Department of Administrative Services to contract with other entity, and to participate in, sponsor, conduct or administer cooperative procurements, for purpose of acquiring, installing, maintaining or operating devices or facilities to deliver electricity to public for electric motor vehicles. Specifies that solely for purpose of contracting agency's participating in, sponsoring, conducting or administering cooperative procurement, device or facility for delivering electricity to public for electric motor vehicles is not public improvement. Becomes operative on January 1, 2020. Takes effect on 91st day following adjournment sine die.

1/28/19 H - Public Hearing held.

1/15/19 H - Referred to Rules.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2242 | **Position** | **Priority**

Bill Info Monitor 2

Summary: Authorizes Public Utility Commission to consider differential energy burden and other inequities of affordability in rates. Authorizes public utilities to enter agreements to provide financial assistance for organizations to represent in regulatory proceedings before commission interests of low-income customers and customers that are members of environmental justice communities. Establishes Office of the Low-Income and Environmental Justice Advocate within commission. Authorizes office to intervene in certain proceedings. Directs commission to establish public process for investigating ways to address and mitigate differential energy burdens on classes of electric company customers and other inequities of affordability. Requires commission to report findings to interim committees of Legislative Assembly related to energy and business no later than September 15, 2020. Sunsets public process January 2, 2021.

2/26/19 H - Work Session scheduled.

1/31/19 H - Public Hearing held.

1/15/19 H - Referred to Energy and Environment with subsequent referral to Ways and Means.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2322 | **Position** | **Priority**

Bill Info Monitor 2

Summary: Requires Land Conservation and Development Commission to amend statewide land use planning goals related to energy to incorporate development of renewable energy facilities and reduction of greenhouse gas emissions and to match state energy policies.

1/18/19 H - Referred to Energy and Environment.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2329	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Modifies definition of "energy facility" for purposes of regulation of energy facilities by Energy Facility Siting Council. Broadens provisions for types of electric power generating plants that may elect to obtain site certificate from council if otherwise not required to obtain site certificate.

1/18/19 H - Referred to Energy and Environment.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2494	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Extends operation of public purpose charges until January 1, 2036.

1/18/19 H - Referred to Energy and Environment.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2611	**Position**	**Priority**
Bill Info	Support	2

Summary: Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.

1/18/19 H - Referred to Energy and Environment.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2618	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Requires State Department of Energy to adopt by rule program for providing rebates for purchase, construction or installation of residential and commercial solar electric systems and paired solar and storage systems. Sets forth rebate limits under program. Establishes Rooftop Solar Incentive Fund. Continuously appropriates moneys in fund to department to issue rebates. Limits total amount of rebates issued annually for commercial systems. Appropriates moneys from General Fund to department for deposit in Rooftop Solar Incentive Fund. Requires department to submit annual report on program to Legislative Assembly. Sunsets January 2, 2024. Takes effect on 91st day following adjournment sine die.

2/28/19 H - Public Hearing scheduled.

1/15/19 H - Referred to Energy and Environment with subsequent referral to Ways and Means.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2791	Position	Priority
Bill Info	Monitor	2

Summary: Modifies cost recovery formula for site certificate holders. Applies to annual fees due on and after July 1, 2020. Establishes Energy Facility Siting Task Force. Sunsets task force on December 31, 2020. Declares emergency, effective on passage.

1/28/19 H - Referred to Energy and Environment with subsequent referral to Ways and Means.

1/24/19 H - First reading. Referred to Speaker's desk.

HB 2808	Position	Priority
Bill Info	Monitor	2

Summary: Requires Oregon Business Development Department to establish competitive clean technology sector development grant program. Requires department to award grants to qualified lenders to develop and administer loan programs for funding clean technology sector development projects. Requires certain reporting related to grant program. Establishes Clean Technology Sector Development Fund. Requires moneys deposited in fund to be used for grant program.

2/4/19 H - Referred to Economic Development with subsequent referral to Ways and Means.

1/28/19 H - First reading. Referred to Speaker's desk.

HB 2855	Position	Priority
Bill Info	Monitor	2

Summary: Modifies general powers of Public Utility Commission.

2/4/19 H - Referred to Energy and Environment.

1/31/19 H - First reading. Referred to Speaker's desk.

HB 5017	Position	Priority
Bill Info	Monitor	2

Summary: Appropriates moneys from General Fund to Department of Environmental Quality for certain biennial expenses. Limits biennial expenditures from fees, moneys or other revenues, including Miscellaneous Receipts, specified bond proceeds and specified federal funds, but excluding lottery funds and other federal funds, collected or received by department. Limits biennial expenditures from lottery moneys allocated from Parks and Natural Resources Fund to department. Authorizes specified nonlimited expenditures. Limits certain biennial expenditures by department from federal funds. Declares emergency, effective July 1, 2019.

2/21/19	H - Public Hearing held.
2/20/19	H - Public Hearing held.
2/19/19	H - Public Hearing held.
2/18/19	H - Public Hearing held.
1/23/19	H - Assigned to Subcommittee On Natural Resources.
1/15/19	H - Referred to Ways and Means.
1/14/19	H - First reading. Referred to Speaker's desk.

SB 0038 **Position** **Priority**

Bill Info Support 2

Summary: Modifies provisions for treatment of renewable energy certificates issued for generation of thermal energy.

2/13/19	H - Referred to Energy and Environment.
2/6/19	H - First reading. Referred to Speaker's desk.
2/5/19	S - Third reading. Carried by Prozanski. Passed.
1/31/19	S - Recommendation: Do pass.
1/31/19	S - Second reading.
1/29/19	S - Work Session held.
1/22/19	S - Public Hearing held.
1/15/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0068 **Position** **Priority**

Bill Info No Position 2

Summary: Increases annual fee imposed on public utilities and telecommunications providers for purpose of defraying costs of Public Utility Commission. Declares emergency, effective on passage.

2/4/19	S - Recommendation: Without recommendation as to passage and be referred to Ways and Means.
2/4/19	S - Referred to Ways and Means by order of the President.
1/31/19	S - Public Hearing and Work Session held.
1/15/19	S - Referred to Business and General Government.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0091 **Position** **Priority**

Bill Info Oppose 2

Summary: Requires at least 50 percent of public purpose charge funds paid to nongovernmental entity to be invested in providing incentives to retail electricity customers for accelerating transportation electrification. Specifies that accelerating transportation electrification qualifies as new market transformation effort for purposes of public purpose charge expenditure standard.

1/15/19 S - Referred to Environment and Natural Resources.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0267 **Position** **Priority**

Bill Info Monitor 2

Summary: Transfers duties, functions and powers of State Department of Energy related to issuance of loans for small scale local energy projects to Oregon Business Development Department. Becomes operative on January 1, 2020. Requires loan contracts to make loans payable in full in event that Director of Oregon Business Development Department formally declares default of payment of loan or that project that is subject of loan fails to meet standards and criteria for projects. Becomes operative on January 1, 2020. Repeals certain provisions related to small scale local energy projects. Abolishes funds associated with provisions. Transfers moneys from abolished funds to Small Scale Local Energy Project Loan Fund. Appropriates moneys from General Fund to Oregon Business Development Department for purposes of Act. Repeals energy efficiency and sustainable technology loan program. Requires State Department of Energy to conduct audit of certain department activities. Declares emergency, effective on passage.

1/15/19 S - Referred to Environment and Natural Resources.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0451 **Position** **Priority**

Bill Info Monitor 2

Summary: Establishes eligibility for renewable energy certificates for facilities that generate electricity from direct combustion of municipal solid waste and became operational before January 1, 1995, if such facilities register with Western Renewable Energy Generation Information System at any time.

1/28/19 S - Recommendation: Without recommendation as to passage and be returned to President's desk for referral. Referred to Environment and Natural Resources by order of the President.

1/25/19 S - Work Session held.

1/17/19 S - Referred to Carbon Reduction.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0503 **Position** **Priority**

Bill Info Support 2

Summary: Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.

1/16/19 S - Referred to Environment and Natural Resources.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0508 **Position** **Priority**

Bill Info Support 2

Summary: Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.

3/7/19 S - Public Hearing Scheduled.

1/16/19 S - Referred to Environment and Natural Resources.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0712 **Position** **Priority**

Bill Info Monitor 2

Summary: Reduces, to 0.15 percent, percentage of energy resource supplier's gross operating revenue that annual energy resource supplier assessment may not exceed.

1/30/19 S - Referred to Environment and Natural Resources.

1/29/19 S - Introduction and first reading. Referred to President's desk.

SB 0713 **Position** **Priority**

Bill Info Monitor 2

Summary: Requires State Department of Energy to conduct study on department's contributions to leading State of Oregon to safe, clean and sustainable energy future.

1/30/19 S - Referred to Environment and Natural Resources.

1/29/19 S - Introduction and first reading. Referred to President's desk.

SB 0714 **Position** **Priority**

Bill Info Monitor 2

Summary: Requires State Department of Energy to conduct study related to Energy Facility Siting Council and report findings to interim committees of Legislative Assembly by September 15, 2021.

1/30/19 S - Referred to Environment and Natural Resources.

1/29/19 S - Introduction and first reading. Referred to President's desk.

SB 0715 **Position** **Priority**

Bill Info Monitor 2

Summary: Requires State Department of Energy to conduct study related to Energy Facility Siting Council and report findings to interim committees of Legislative Assembly by September 15, 2021.

1/30/19 S - Referred to Environment and Natural Resources.

1/29/19 S - Introduction and first reading. Referred to President's desk.

SB 5534	Position	Priority
Bill Info	Monitor	2

Summary: Limits certain biennial expenditures from fees, moneys or other revenues, including Miscellaneous Receipts, but excluding lottery funds and federal funds, collected or received by Public Utility Commission of Oregon. Limits biennial expenditures by commission from federal funds. Authorizes specified nonlimited expenditures. Declares emergency, effective July 1, 2019.

1/30/19	S - Public Hearing held.
1/23/19	S - Assigned to Subcommittee On Transportation and Economic Development.
1/15/19	S - Referred to Ways and Means.
1/14/19	S - Introduction and first reading. Referred to President's desk.

Impacts of Oregon's Cap and Trade Regulation on Industry

Preliminary Analysis of the Direct and Indirect Cost Impacts of HB 2020 on AWEC Facilities

February 22, 2019

ENERGY STRATEGIES

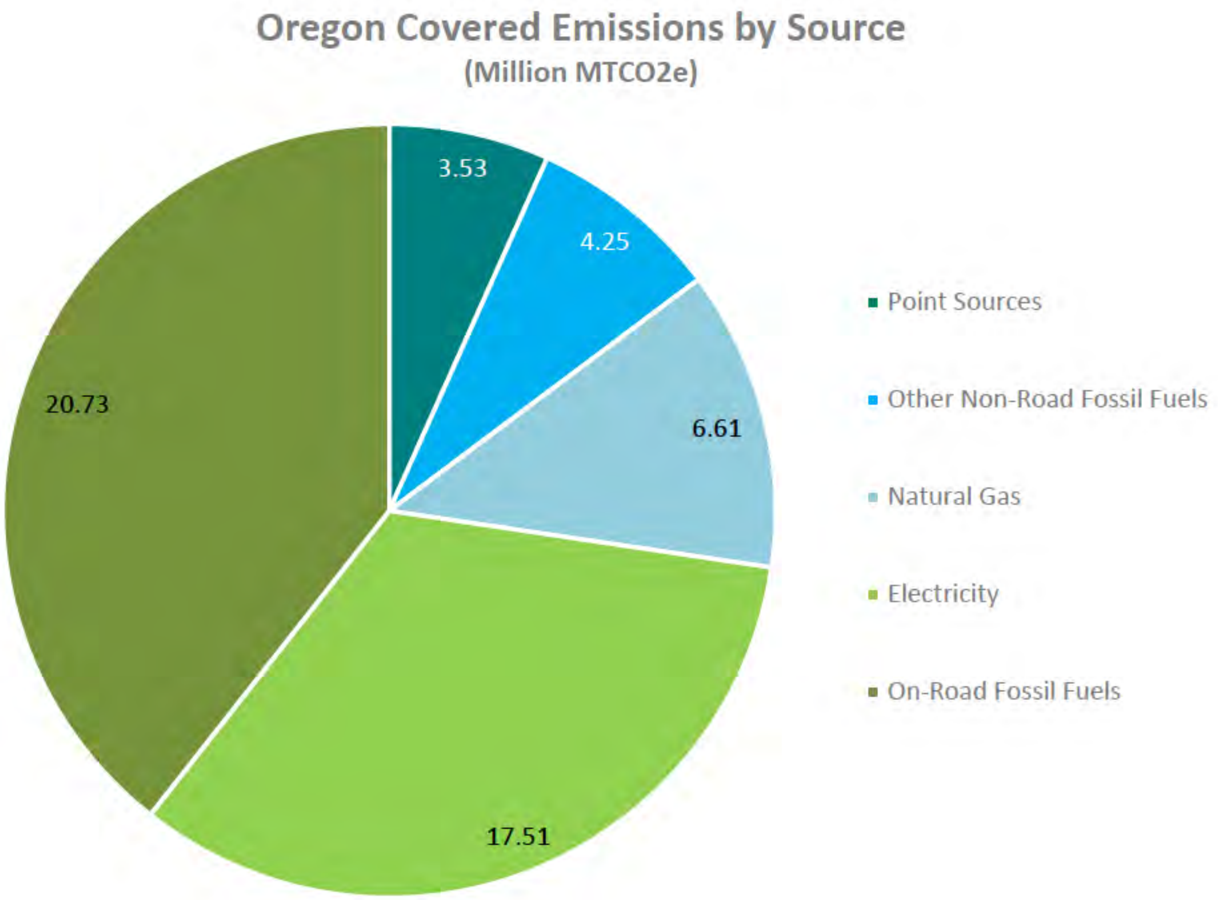
Emissions and AWEC Facilities Covered by HB 2020

HB 2020 emissions reduction goal is 80% below 1990 levels by 2050

- This emission goal is front-loaded
  - ❖Interim goal of 45% below 1990 levels by 2035
- Front loaded goal requires an average emissions reduction of 2 million $mtCO_2e$ per year between 2021-2935.
  - ❖A straight-line goal would require an average annual reduction of 1.5 million mtCO2e
- A front-loaded goal accelerates emissions reductions but increases costs of compliance in the short term

Covered GHG Emissions and Sources

- Covered GHG emissions totals 52.6 million $MTCO_2e$
  - ❖ Carbon dioxide from combustion of fossil fuels, methane, nitrous oxide
  - ❖ Process emissions including hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, nitrogen trifluoride
- Five primary covered sources
  - ❖ Electric Generation and Consumption
  - ❖ Transportation Fuels except fuel used in aviation, watercraft, or railroad locomotives
  - ❖ Natural Gas End-Use
  - ❖ Large Industrial Point Sources (AWEC facilities)
  - ❖ Other Fossil Fuels



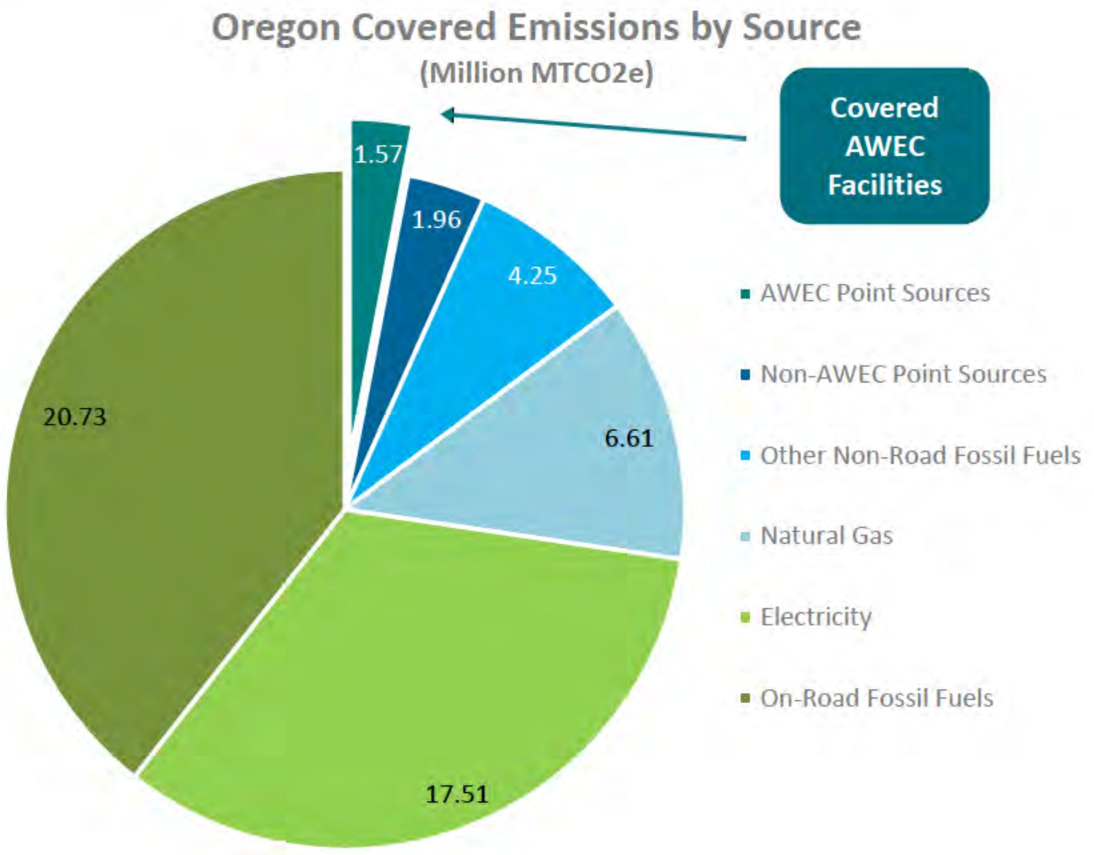
AWEC facilities that will be covered by HB 2020

- HB 2020's compliance requirements apply to all point sources in Oregon with an air permit and that emit > 25,000 $MTCO_2e$
- Twelve AWEC member facilities' CO_2e emissions exceed 25,000 metric tons and will be covered
- AWEC's covered facilities' emissions total 1.57 million metric tons

Company Name	Facility Name	Covered Emissions ($MTCO_2$)
Georgia Pacific	Georgia-Pacific Toledo LLC	336,521
Intel	Hillsboro Manufacturing Campus	259,593
Georgia Pacific	Georgia-Pacific Consumer Products LP - Clatskanie	257,824
Dyno Nobel	St Helens Manufacturing Plant	198,275
ON-Semiconductor Industries	Gresham Manufacturing Plant	92,890
International Paper	Springfield Mill	111,915
Evraz	Rivergate Plant	95,586
Schnitzer Steel	Cascade Steel-McMinnville	72,752
US Gypsum Company	Rainer Wallboard Plant	42,882
Lamb Weston, Inc.	Lamb Weston - Boardman East	37,712
Lamb Weston, Inc.	Lamb Weston - Hermiston	38,118
Lamb Weston, Inc.	Lamb Weston - Boardman West	29,993

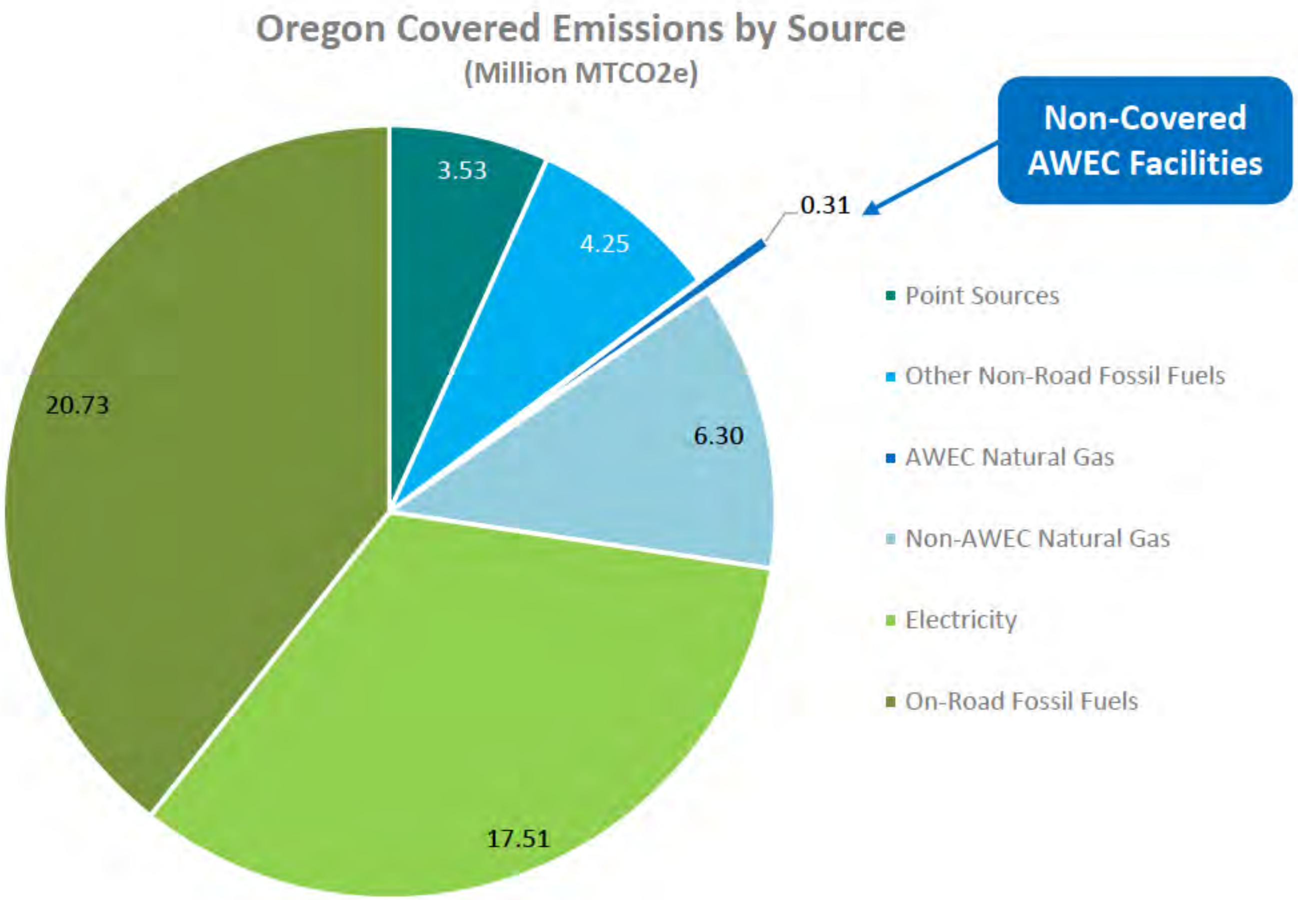
AWEC covered facilities are a small portion of total emissions regulated by HB 2020

- Emissions of covered Large Industrial Point Sources' total 3.53 million metric tons and represents 6.7 percent of total covered emissions under the proposed cap and trade regulation
- AWEC's covered facilities' emissions represent 44 percent of all Point Source emissions covered under the regulation and represent less than 3 percent of total state-wide CO_2e emissions covered under HB 2020



Most AWEC member facilities emissions are not covered

- Sixty-one AWEC members' facilities will not be covered
- Total estimated emissions from these facilities represent less than 310,000 $MTCO_2e$ or 0.6 percent of the emissions covered by the proposed regulation.
- AWEC facilities not covered by the regulation will be impacted indirectly through higher electricity and natural gas costs



Direct Compliance Cost Impacts

Covered AWEC Facilities

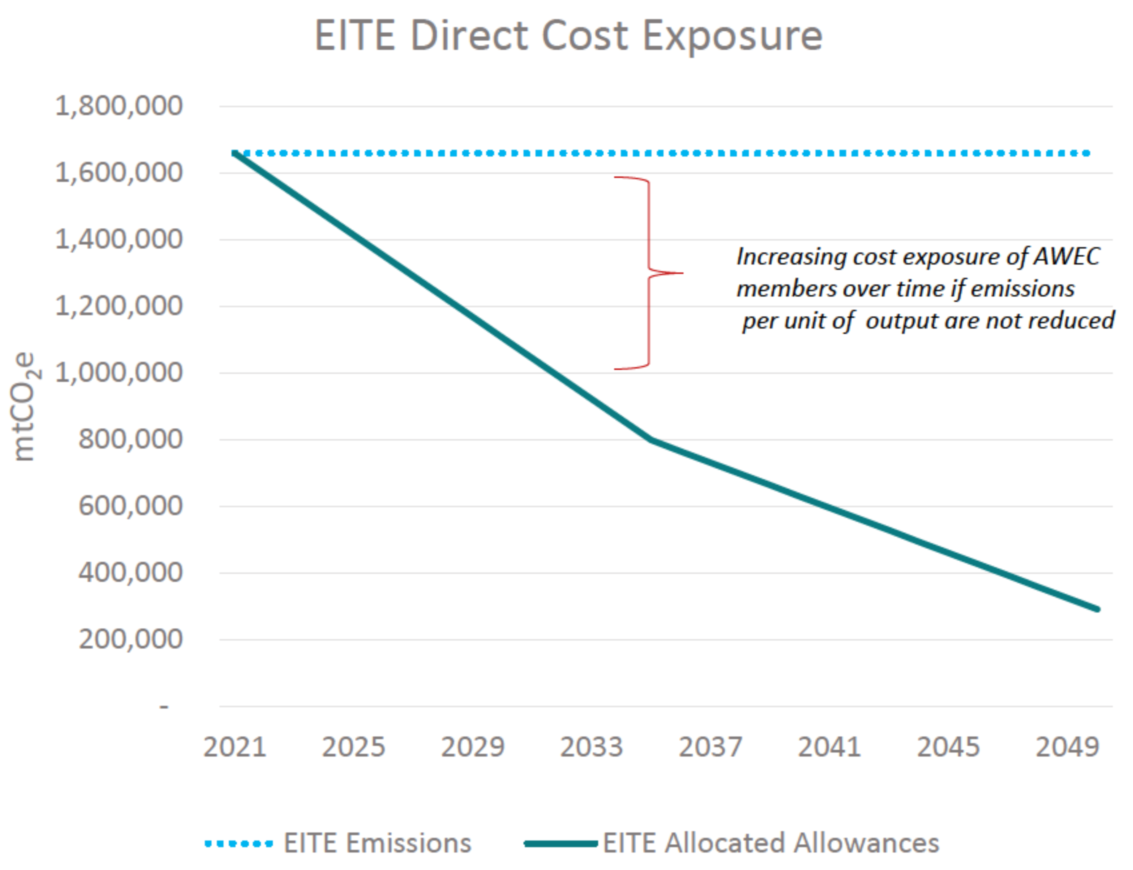
AWEC covered facilities designated as EITE will receive “no cost” allowances

- AWEC facilities that are covered will be required to purchase allowances equal to the facility’s goods-specific emissions calculation during the compliance period
- Eleven of AWEC members’ covered facilities are designated EITE and will receive “no cost” allowances
- The NAISC codes of Dyno Nobel’s St. Helens plant is not included in the current version of HB 2020’s list of EITE eligible entities
- Dyno Nobel will not receive allowances and will be required to purchase allowances equivalent to its goods-specific-emissions calculations starting in 2021

Company Name	Facility Name	Primary NAICS Code	EITE Allowance Allocation
Dyno Nobel	St Helens Manufacturing Plant	325188	No
Evraz	Rivergate Plant	331111	Yes
Georgia Pacific	GP Toledo LLC	322130	Yes
Georgia Pacific	GP Consumer Products LP - Clatskanie	322121	Yes
Intel	Hillsboro Manufacturing Campus	334413	Yes
International Paper	Springfield Mill	322130	Yes
Lamb Weston, Inc.	Lamb Weston - Boardman East	311411	Yes
Lamb Weston, Inc.	Lamb Weston - Hermiston	311411	Yes
Lamb Weston, Inc.	Lamb Weston - Boardman West	311412	Yes
Schnitzer Steel	Cascade Plant _ McMinneville	331111	Yes
ON-Semi-Conductor Industries	Gresham Manufacturing Plant	334413	Yes
US Gypsum Company	Rainer Wallboard Plant	327420	Yes

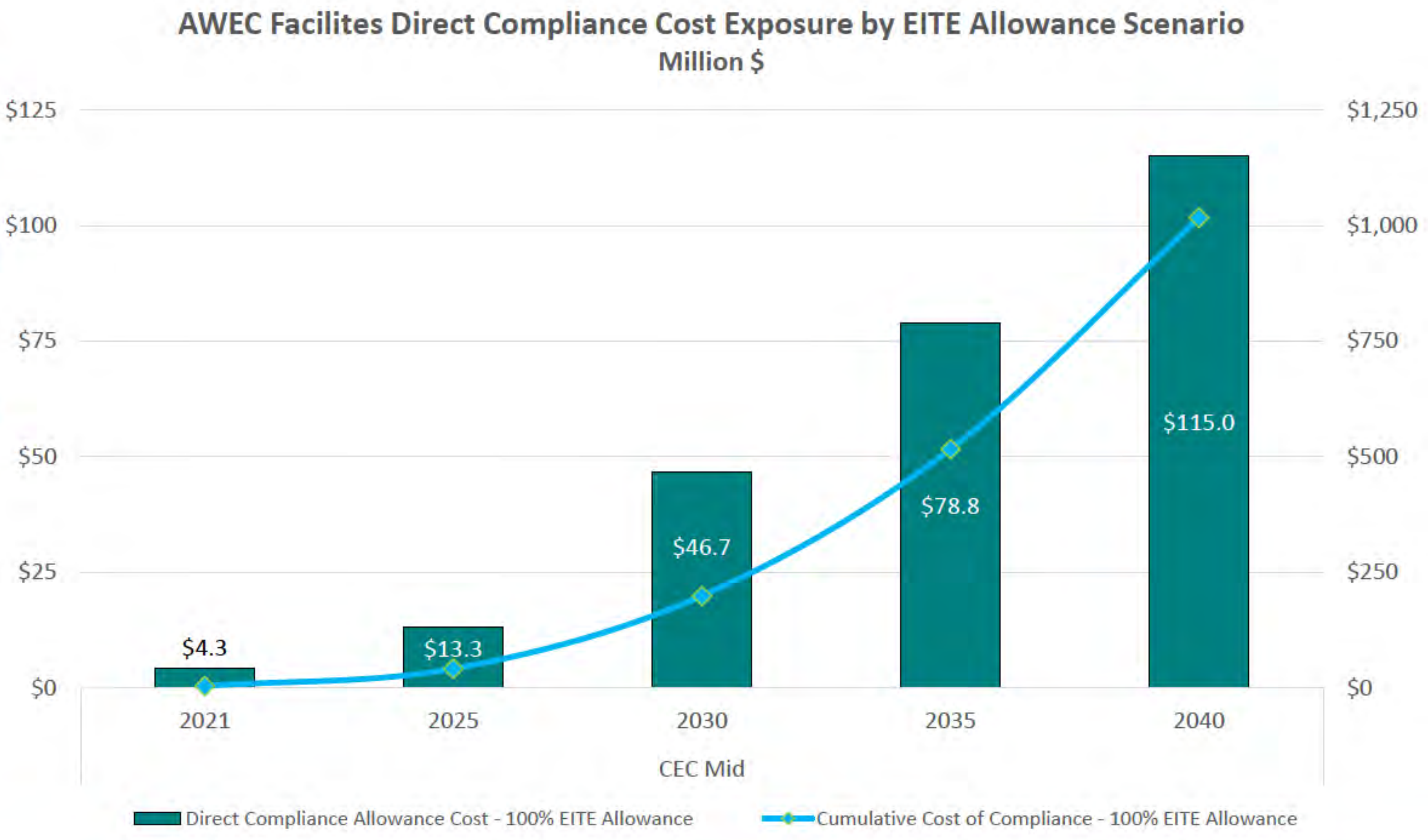
Distribution of “no cost” allowances decreases and increases covered facilities cost exposure over time

- EITE covered entities receive 100% of its calculated good-specific emissions in 2021
- However, allowances will decrease annually in proportion to the state-wide allowance budget and the entities calculated goods-specific emissions calculation
- As the number of no-cost allowances decline, facilities will need to buy allowances at auction or in the secondary markets, if emissions per unit of production are unchanged



Direct compliance costs will grow over time as the allocation of "no cost" allowances decreases

- Eleven AWEC members' facilities will have no direct compliance costs in 2021 because of the distribution of "no cost" allowance
- Distribution of "no cost" allowances will decrease each year at the rate of the allowance budget so AWEC EITE facilities' costs of purchasing allowances will increase starting in 2022
- Annual compliances cost for AWEC facilities could grow to over $115 million dollars per year in 2040
- Cumulative costs of purchasing allowances from 2021 to 2040 could be over $1 billion



Indirect Electricity Costs Impacts

Non-Covered AWEC Facilities

AWEC facilities' receive electricity service from more than 13 electricity providers

Investor Owned Utilities

- Pacific Power and Light
- Portland General Electric

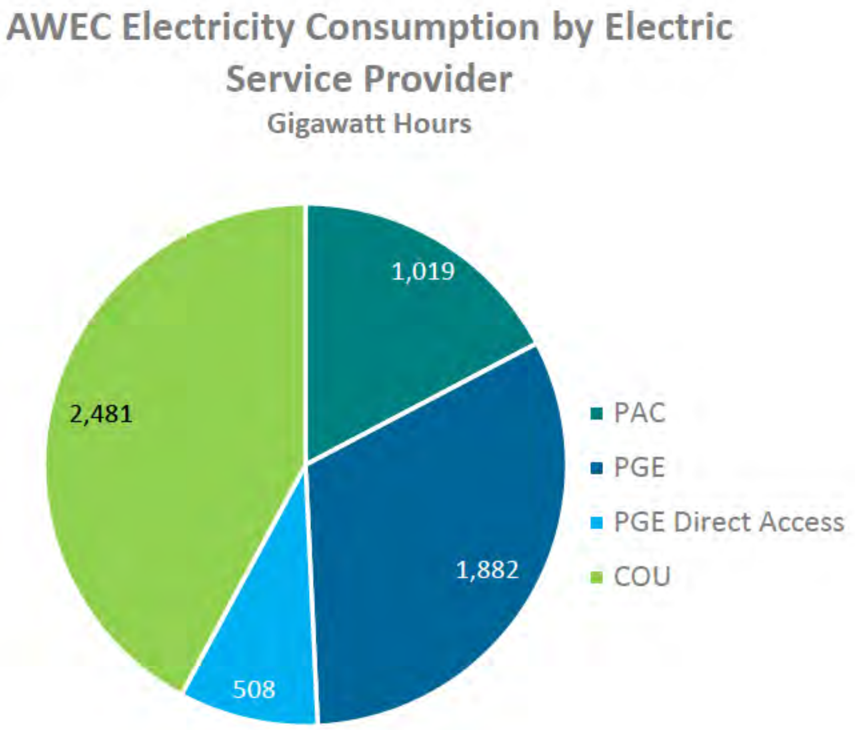
Consumer-Owned Utilities

- Central Lincoln PUD
- Clatskanie PUD
- Columbia River PUD
- Emerald PUD
- Eugene Water and Electric Board
- Oregon Trail Electric Cooperative
- Salem Electric
- Springfield Utility Board
- Tillamook PUD
- Umatilla Electric Cooperative

PGE Direct Access

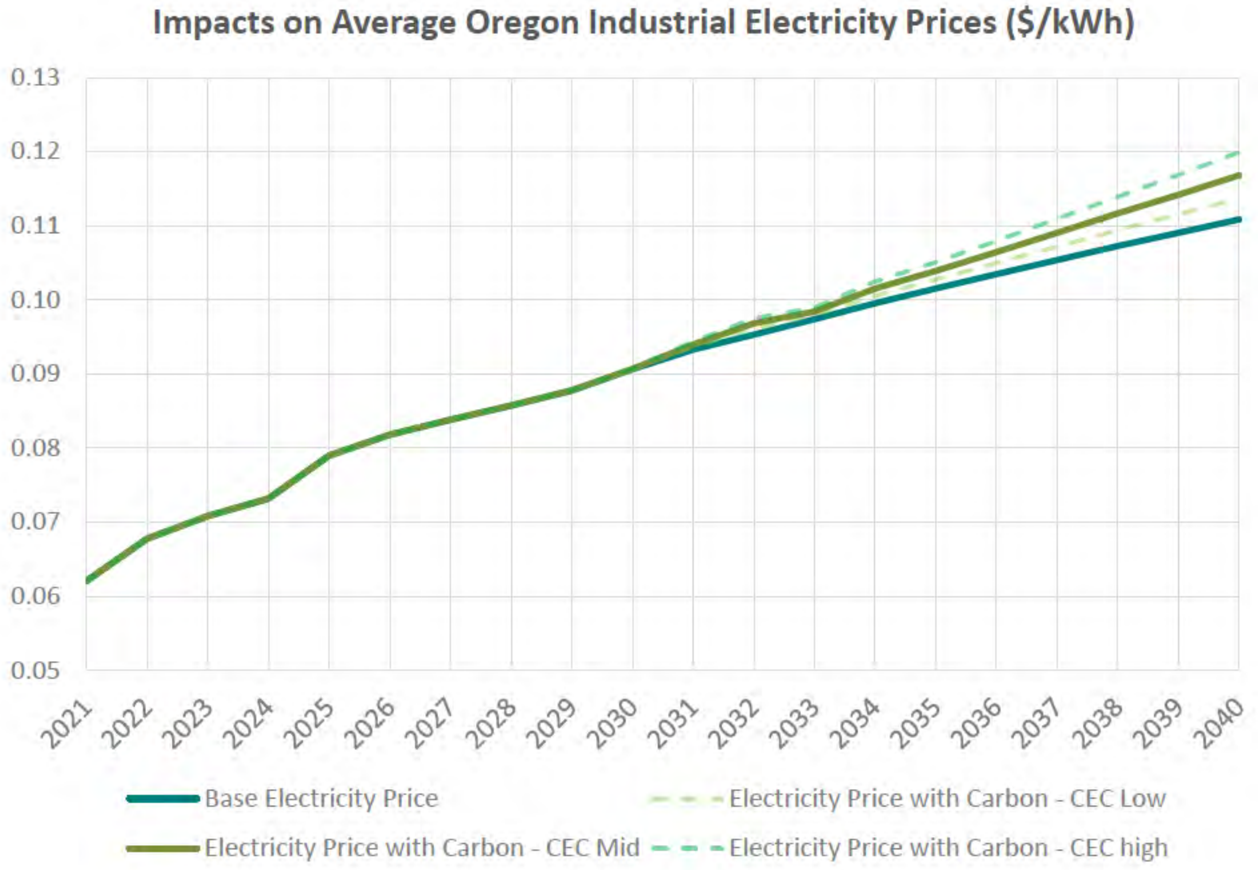
AWEC facilities exposure to higher electricity costs is dependent on their electricity supplier

- Pacific Power and Light and Portland General Electric (IOU) serve 49 percent of AWEC members' facilities power demand
- Consumer owned utilities (COU) supply 42 percent of AWEC facilities power
- Ten AWEC members' facilities obtain 9 percent of AWEC's total power supply from the wholesale market
- Electricity cost impacts will be a function of the carbon content of utilities' and marketers electricity supplies
- Carbon content of power supplies from IOUs and wholesale electricity suppliers (direct access) is 20-30 times higher than Oregon's COUs



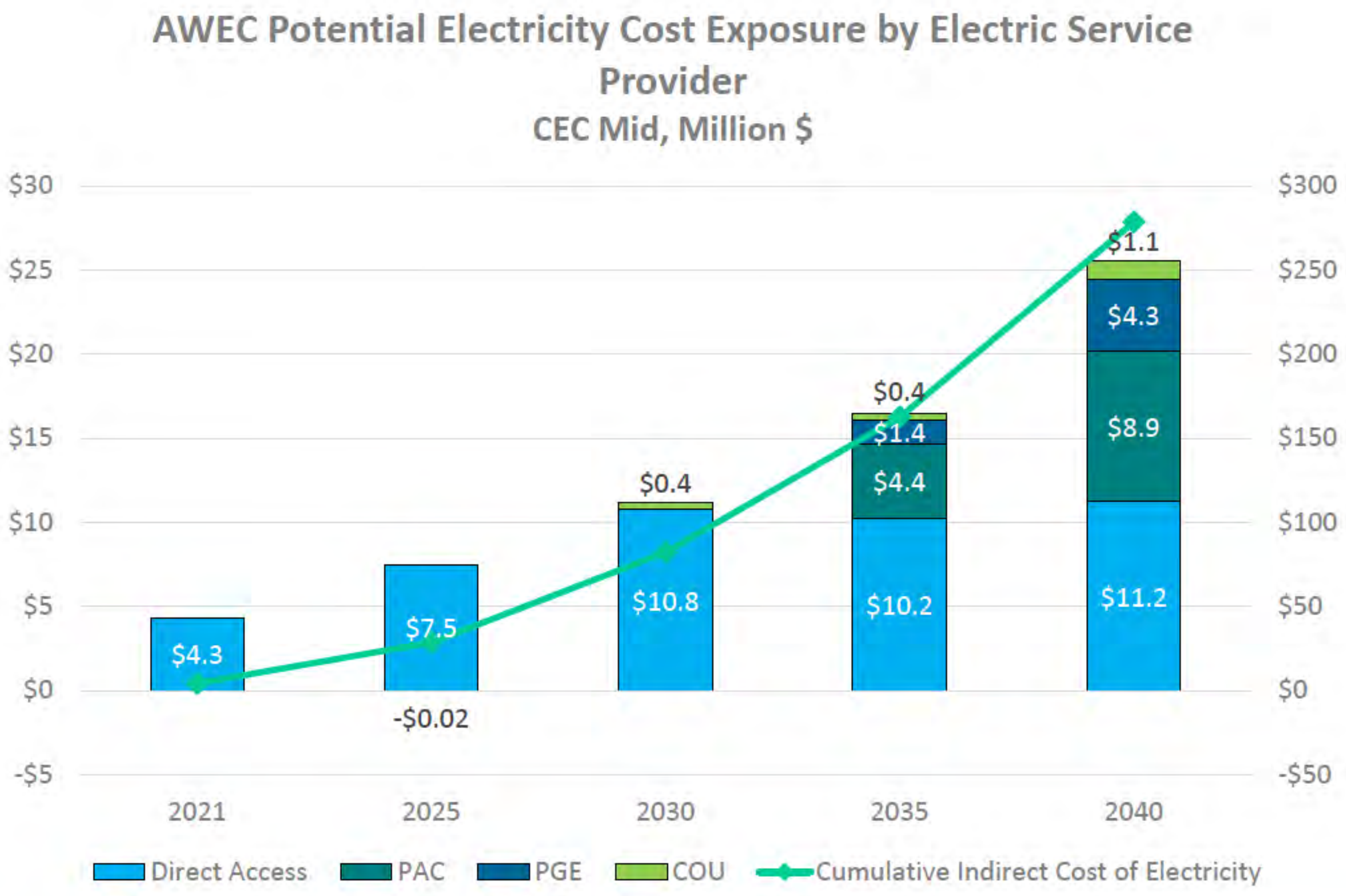
Impacts on electricity prices will in part be mitigated by the distribution of “no cost” allowances

- Over ninety percent of the power supplied to AWEC facilities will initially receive “no cost” allowances
  - ❖ IOUs are allocated 100% allowances to cover forecasted emissions through 2030
  - ❖ COUs receive 100% forecasted allowances in 2021 but the allocation decreases at the rate of the allowance budget starting in 2022
  - ❖ Direct access, wholesale electricity suppliers of AWEC members’ facilities do not receive allowances
- Impacts on electricity prices will be mitigated by the distribution of “no cost” allowances for customers of IOUs and COUs



Electricity costs of AWEC facilities direct access customers will be impacted the most

- Electricity cost increases will be immediate for AWEC members who are direct access customers
- For 90 percent of the electricity supplied to AWEC members' facilities the electricity cost impacts should be minimal through 2030 but then increase sharply
- Between 2030 and 2040 AWEC members' facilities are projected to spend an additional $196 million in added electricity costs due to HB 2020

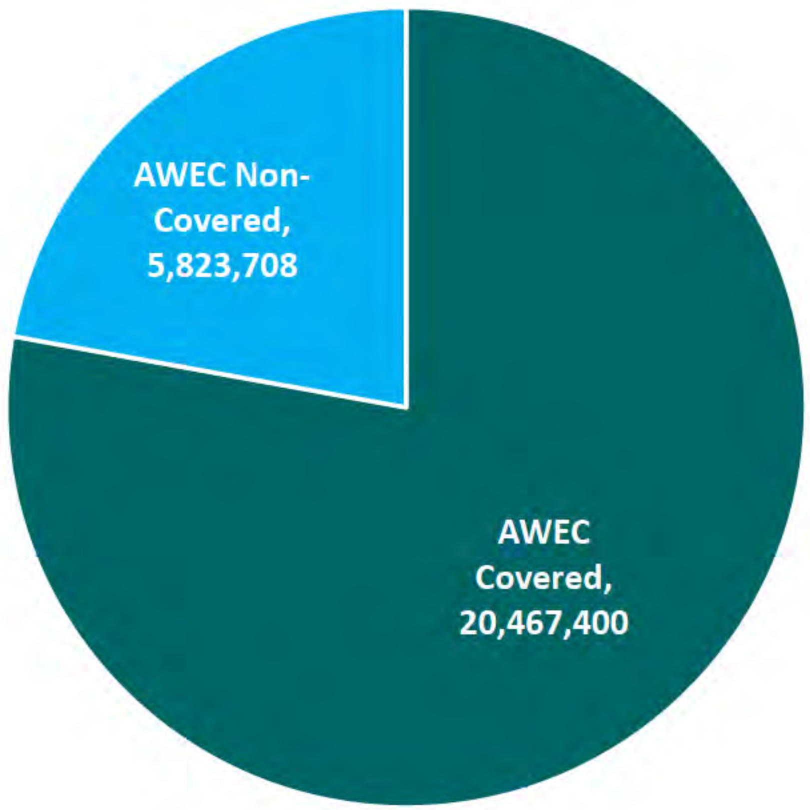


Indirect Natural Gas Costs Impacts

Non-Covered AWEC Facilities

Twenty-five percent of the natural gas consumption by AWEC members' facilities will be subject to cost increases

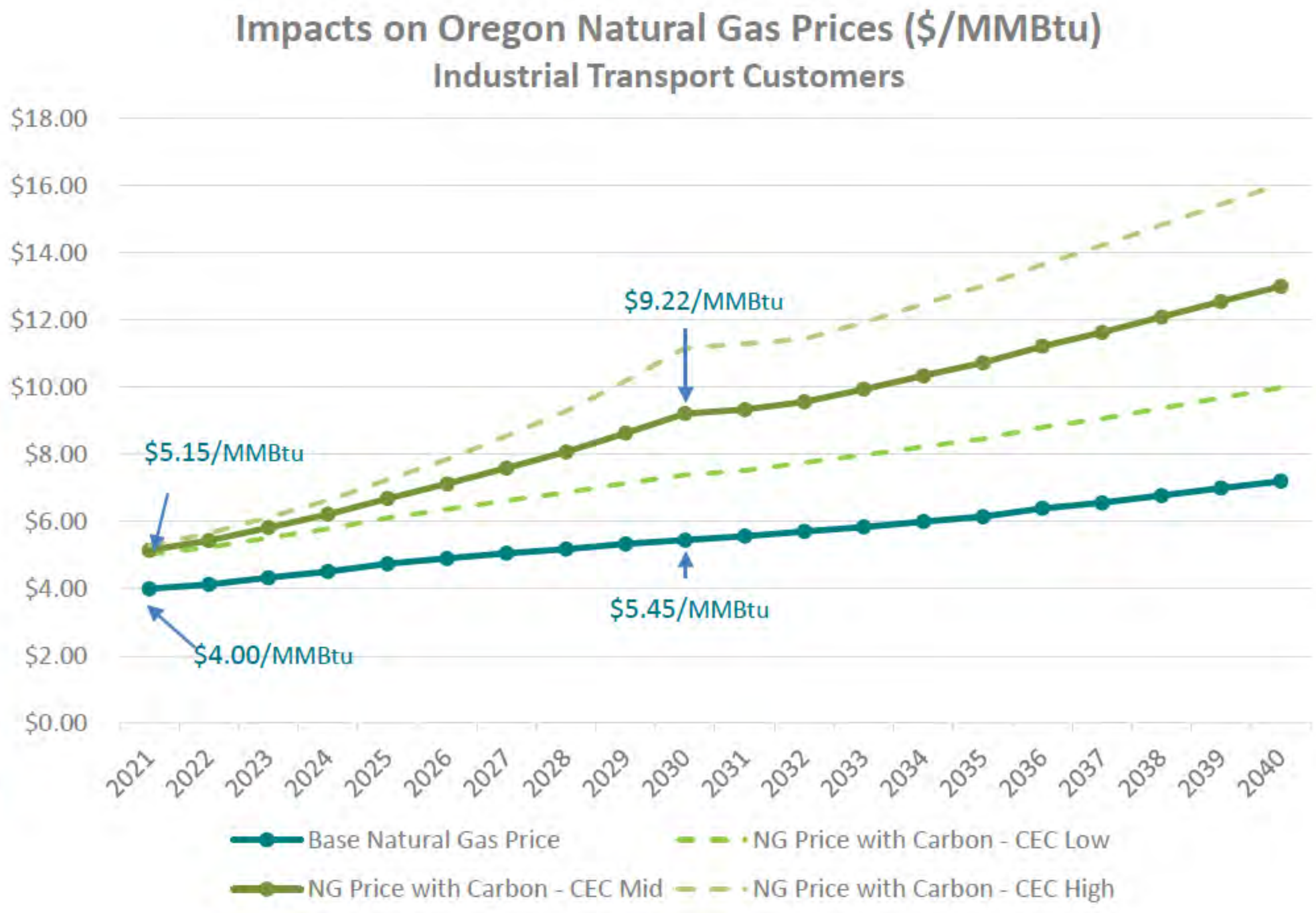
- The emissions from seventy-five percent of AWEC member facilities' natural gas consumption will be regulated as stationary point sources.
- Natural gas marketers will be required to purchase allowances for the emissions from natural gas sold to the remaining AWEC facilities not directly covered by the legislation
- Costs of allowances will be passed on through higher natural costs and affect 25 percent (5.8 million MMBtu) of natural gas consumed by AWEC members' facilities.



Confidential Not for Distribution

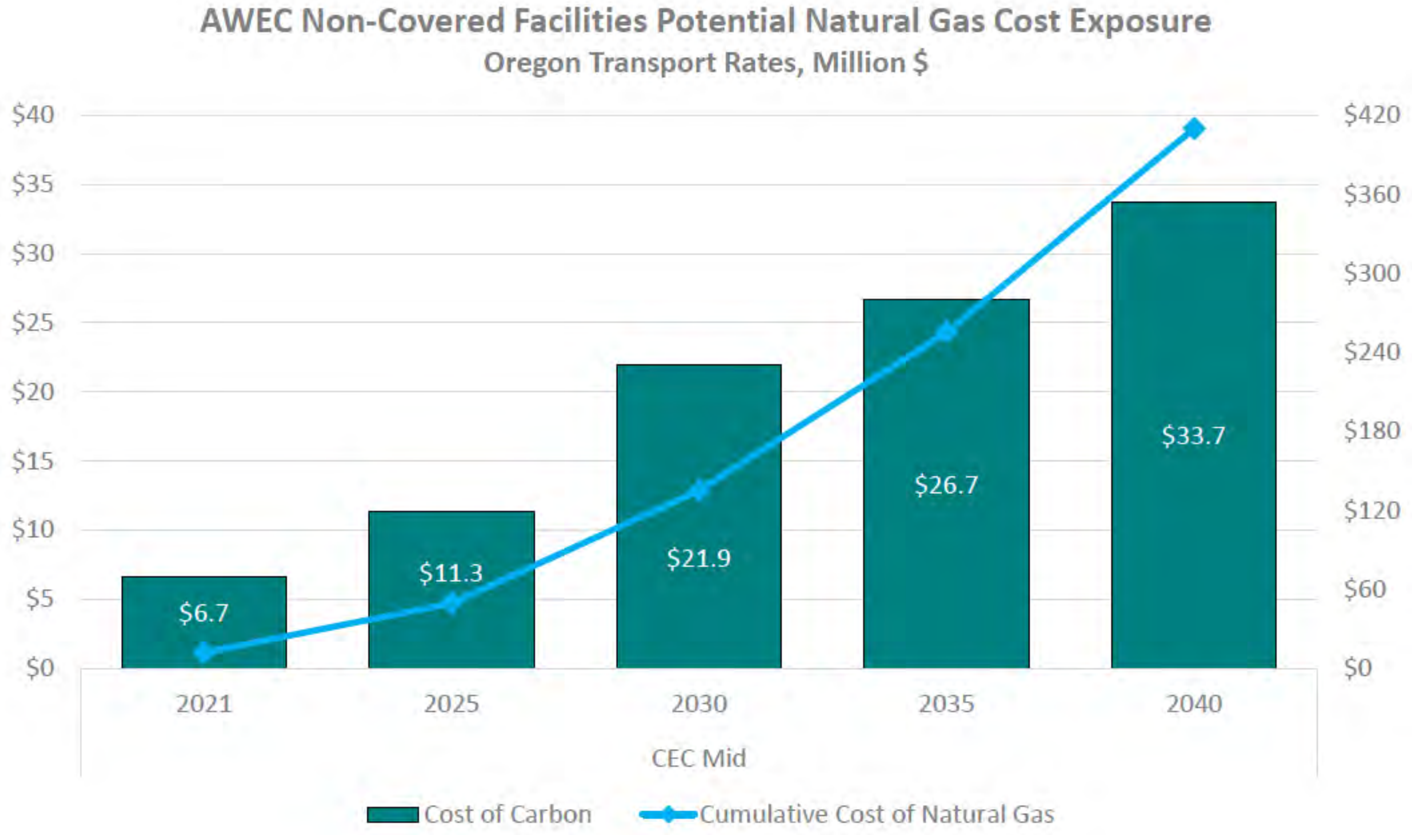
Increases in the price of natural gas will be dependent on the costs of allowances

- HB 2020 will have an immediate impact on natural gas prices
- In 2021 natural gas prices are estimated to increase 29 percent above the estimated base price of $4.00 per MMBtu assuming CEC Mid allowance prices
- By 2030 the price of natural gas is projected to be $3.77 higher than the forecasted base price of $5.45 per MMBtu, representing a 60 percent increase in price



AWEC facilities cost exposure to higher natural gas costs begins in 2021 and increases each year

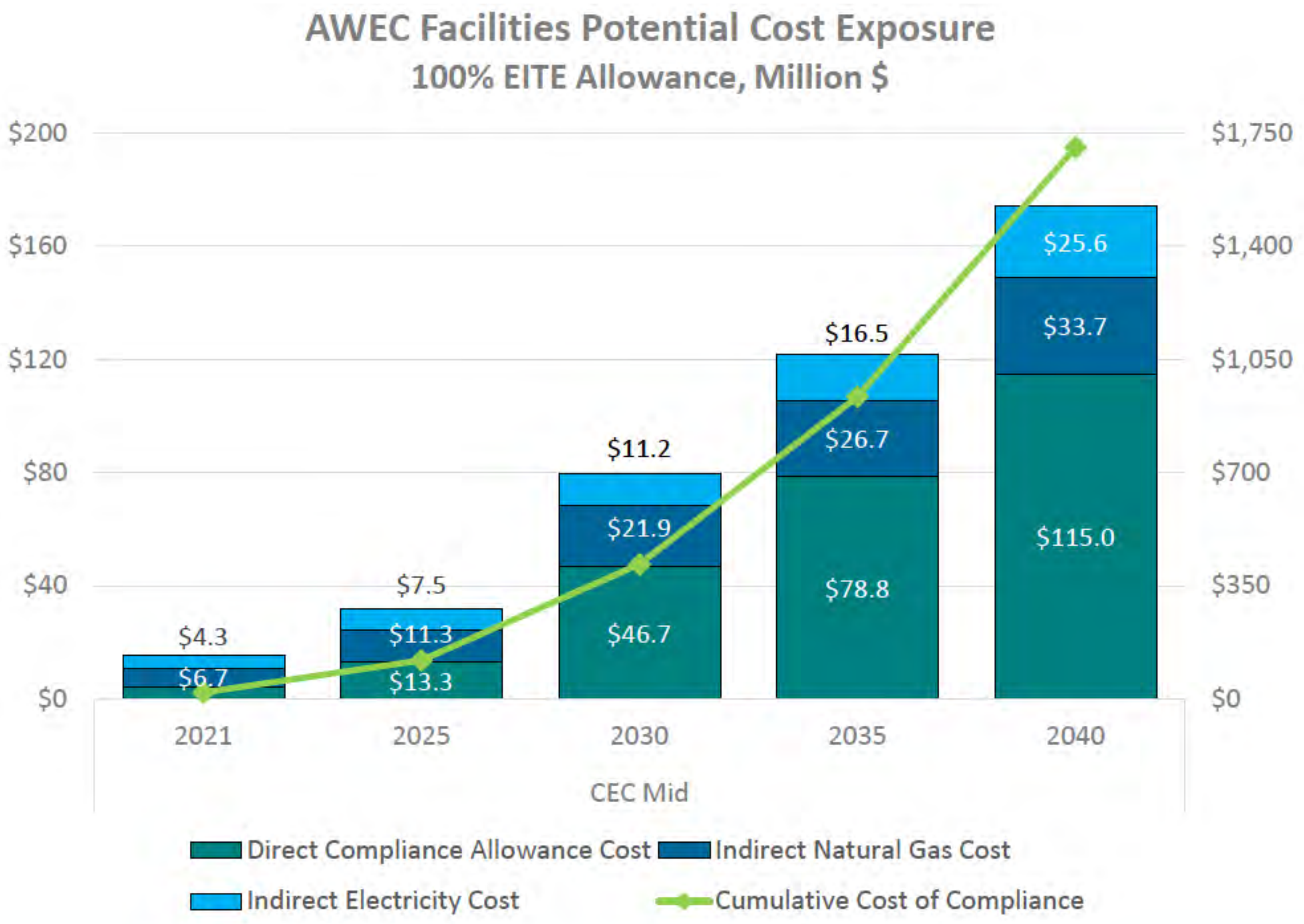
- Cost increases will be immediate and impact 25 percent of total natural gas consumed by AWEC members' facilities
- In 2021, AWEC facilities will spend an additional $6.7 million for natural gas above the $21.2 million they were projected to spend
- Between 2021 and 2040 non-covered AWEC members' facilities are projected to spend an additional $410 million in added natural gas costs due to HB 2020



Summary and Conclusions

AWEC facilities direct and indirect cost exposure to HB 2020 is significant

- AWEC members greatest cost exposure to HB 2020 are the direct compliance costs 12 facilities will incur to purchase allowances
- Indirect costs associated with higher electricity and natural gas costs represent 59% of the total cost impacts faced by AWEC members' facilities in 2025 and 40% in 2030
- Distribution of "no cost" allowances to IOUs and COUs initially diminish the impacts on electricity costs to their customers, however electricity costs rise steeply after 2030
- In total, the cumulative additional costs HB 2020 imposes on AWEC members' facilities will exceed $335 million by 2030 and rise to over $1.5 billion by 2040



ENERGY
STRATEGIES

Contact

215 South State Street, Suite 200
Salt Lake City, Utah 84111

(801) 355-4365

energystrat.com

Contact

Jeff Burks, Principal jburks@energystrat.com

Daniel Ramirez, Consultant dramirez@energystrat.com

From:	John Carr <jcarr@awec.solutions>
Sent time:	02/26/2019 08:14:37 AM
To:	Tony Hardenbrook
Subject:	RE: AWEC Oregon Weekly Legislative Update

Thanks Tony. I'll have Tyler (our lead attorney) take a look at your situation. Cheers, John

From: Tony Hardenbrook <aharden2@uoregon.edu>
Sent: Tuesday, February 26, 2019 5:27 AM
To: John Carr <jcarr@awec.solutions>
Subject: RE: AWEC Oregon Weekly Legislative Update

John,

UO has two natural gas boilers for producing steam to heat our campus. UO also has a Co-Generation system that uses a Solar combustion turbine generator and Heat Recovery Steam Generator for electricity and heating steam.

Our Co-Generation system doesn't run very often. There are some questions about how the current Oregon climate legislation applies to University of Oregon. We are just below the 25,000MTCO2 limit and expect to exceed the limit next year when some new large buildings come online.

Can you please ask for a review of our particular situation? Thanks.

R/
Tony

From: John Carr <jcarr@awec.solutions>
Sent: Monday, February 25, 2019 9:15 AM
To: Aldis Raisters <Aldis.Raisters@gapac.com>; Alex Koleber <akoleber@uoregon.edu>; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bill Gillmore <billmg@penwool.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <[redacted]>; Calli Daly <calli.daly@kochps.com>; Chad Sorber <sorber@ohsu.edu>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <Chris_h@columbiasteel.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leone <cynthia.leon@ipaper.com>; Dave Post <Dave.Post@wahchang.com>; David Clemens <david.clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Tobin <DavidTobin@boisepaper.com>; Dean Gallinger <dean.m.gallinger@boeing.com>; Desiree Higgins <desireeh@uoregon.edu>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <Drew.m.bryck@boeing.com>; Drew Gilpin <Drew.Gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@pccstructurals.com>; Eric Streicher <Eric.Streicher@airgas.com>; Gary Collison <gcollison@pccstructurals.com>; Gary Londo <gary.j.londo@boeing.com>; James Price <JaDPrice@gapac.com>; Jason Hakes <jason.c.hakes@intel.com>; Jeff Steed <jeff.steed@northwesthardwoods.com>; Jena Hackett <Jena.Hackett@ipaper.com>; Jenny Dresler <jenny@pacounsel.org>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; Josh D. Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Kelly Francone <kfrancone@energystrat.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Mark Dunn <mark.dunn@simplot.com>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Martha Cox <Martha_C@columbiasteel.com>; Marty Sedler <marty.sedler@intel.com>; Mary Catherine McAleer <marycatherine.mcaleer@weyerhaeuser.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <Matt.Upmeyer@lambweston.com>; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <mkuhn@westrock.com>; Michael Slattery <Michael.slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Nick Avenetti <nick@perlite.com>; Noel Mak <Noel.Mak@atimetals.com>; Pat Lydon <plydon@lhs.org>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Paul Langley <langley@uoregon.edu>; Phil Zirngibl <Pzirngi@gapac.com>; Richard White <richard.a.white7@boeing.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.beaver@weyerhaeuser.com>; Samantha Julian <Samanthaj@pacounsel.org>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <sgutting@energystrat.com>; Skyler Mlasko <Skyler.Mlasko@northwesthardwoods.com>; Spiro Xenos <spiro.e.xenos@boeing.com>; Steven Castracane <steven.castracane@linde.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tony Hardenbrook <aharden2@uoregon.edu>; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; Willaim McSherry <william.mcsherry@boeing.com>; Jeff Burks <jburks@energystrat.com>
Subject: AWEC Oregon Weekly Legislative Update

Oregon AWEC members,

Please find attached the weekly legislative update from our Oregon lobbyists at PAC Counsel. Also attached is the Oregon cap-and-trade impact report developed by Energy Strategies.

Regards,

John

--

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell:
Website: http://www.awec.solutions
E-mail: jcarr@awec.solutions

From: John Carr <jcarr@awec.solutions>
Sent time: 02/26/2019 09:31:15 AM
To: Tony Hardenbrook
Subject: RE: AWEC Oregon Weekly Legislative Update

Thanks Tony.

From: Tony Hardenbrook <aharden2@uoregon.edu>
Sent: Tuesday, February 26, 2019 8:28 AM
To: John Carr <jcarr@awec.solutions>
Subject: Re: AWEC Oregon Weekly Legislative Update

30 within the utility department. Overall, UO employs about 5800.

On Tue, Feb 26, 2019 at 10:18 AM -0600, "John Carr" <jcarr@awec.solutions> wrote:

> Hi Tony, I forgot to ask. How many employees do you have? Cheers, J.
>
> ---
>
> **From:** Tony Hardenbrook <aharden2@uoregon.edu>
> **Sent:** Tuesday, February 26, 2019 5:27 AM
> **To:** John Carr <jcarr@awec.solutions>
> **Subject:** RE: AWEC Oregon Weekly Legislative Update
>
> John,
>
> UO has two natural gas boilers for producing steam to heat our campus. UO also has a Co-Generation system that uses a Solar combustion turbine generator and Heat Recovery Steam Generator for electricity and heating steam.
>
> Our Co-Generation system doesn't run very often. There are some questions about how the current Oregon climate legislation applies to University of Oregon. We are just below the 25,000MTCO2 limit and expect to exceed the limit next year when some new large buildings come online.
>
> Can you please ask for a review of our particular situation? Thanks.
>
> R/
> Tony
>
> **From:** John Carr <jcarr@awec.solutions>
> **Sent:** Monday, February 25, 2019 9:15 AM
> **To:** Aldis Raisters <Aldis.Raisters@gapac.com>; Alex Koleber <akoleber@uoregon.edu>; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bill Gillmore <billmg@penwool.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <[redacted]>; Calli Daly <calli.daly@kochps.com>; Chad Sorber <sorber@ohsu.edu>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <Chris_h@columbiasteel.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leone <cynthia.leon@ipaper.com>; Dave Post <Dave.Post@wahchang.com>; David Clemens <david.clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Tobin <DavidTobin@boisepaper.com>; Dean Gallinger <dean.m.gallinger@boeing.com>; Desiree Higgins <desireeh@uoregon.edu>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <Drew.m.bryck@boeing.com>; Drew Gilpin <Drew.Gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@pccstructurals.com>; Eric Streicher <Eric.Streicher@airgas.com>; Gary Collison <gcollison@pccstructurals.com>; Gary Londo <gary.j.londo@boeing.com>; James Price <JaDPrice@gapac.com>; Jason Hakes <jason.c.hakes@intel.com>; Jeff Steed <jeff.steed@northwesthardwoods.com>; Jena Hackett <Jena.Hackett@ipaper.com>; Jenny Dresler <jenny@pacounsel.org>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; Josh D. Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Kelly Francone <kfrancone@energystrat.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Mark Dunn <mark.dunn@simplot.com>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Martha Cox <Martha_C@columbiasteel.com>; Marty Sedler <marty.sedler@intel.com>; Mary

Catherine McAleer <marycatherine.mcaleer@weyerhaeuser.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <Matt.Upmeyer@lambweston.com>; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <mkuhn@westrock.com>; Michael Slattery <Michael.slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Nick Avenetti <nick@perlite.com>; Noel Mak <Noel.Mak@atimetals.com>; Pat Lydon <plydon@lhs.org>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Paul Langley <langley@uoregon.edu>; Phil Zirngibl <Pzirngi@gapac.com>; Richard White <richard.a.white7@boeing.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.beaver@weyerhaeuser.com>; Samantha Julian <Samanthaj@pacounsel.org>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <sgutting@energystrat.com>; Skyler Mlasko <Skyler.Mlasko@northwesthardwoods.com>; Spiro Xenos <spiro.e.xenos@boeing.com>; Steven Castracane <steven.castracane@linde.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tony Hardenbrook <aharden2@uoregon.edu>; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; Willaim McSherry <william.mcsherry@boeing.com>; Jeff Burks <jburks@energystrat.com>
Subject: AWEC Oregon Weekly Legislative Update

Oregon AWEC members,

Please find attached the weekly legislative update from our Oregon lobbyists at PAC Counsel. Also attached is the Oregon cap-and-trade impact report developed by Energy Strategies.

Regards,

John

--

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell: [redacted]
Website: http://www.awec.solutions
E-mail: jcarr@awec.solutions

From:	John Carr <jcarr@awec solutions>
Sent time:	03/02/2019 06:36:11 AM
To:	Boz Van Houten
Cc:	kfrancone@energystrat com; Tony Hardenbrook
Subject:	RE: AWEC Members' Positive Contributions to Carbon Reduction

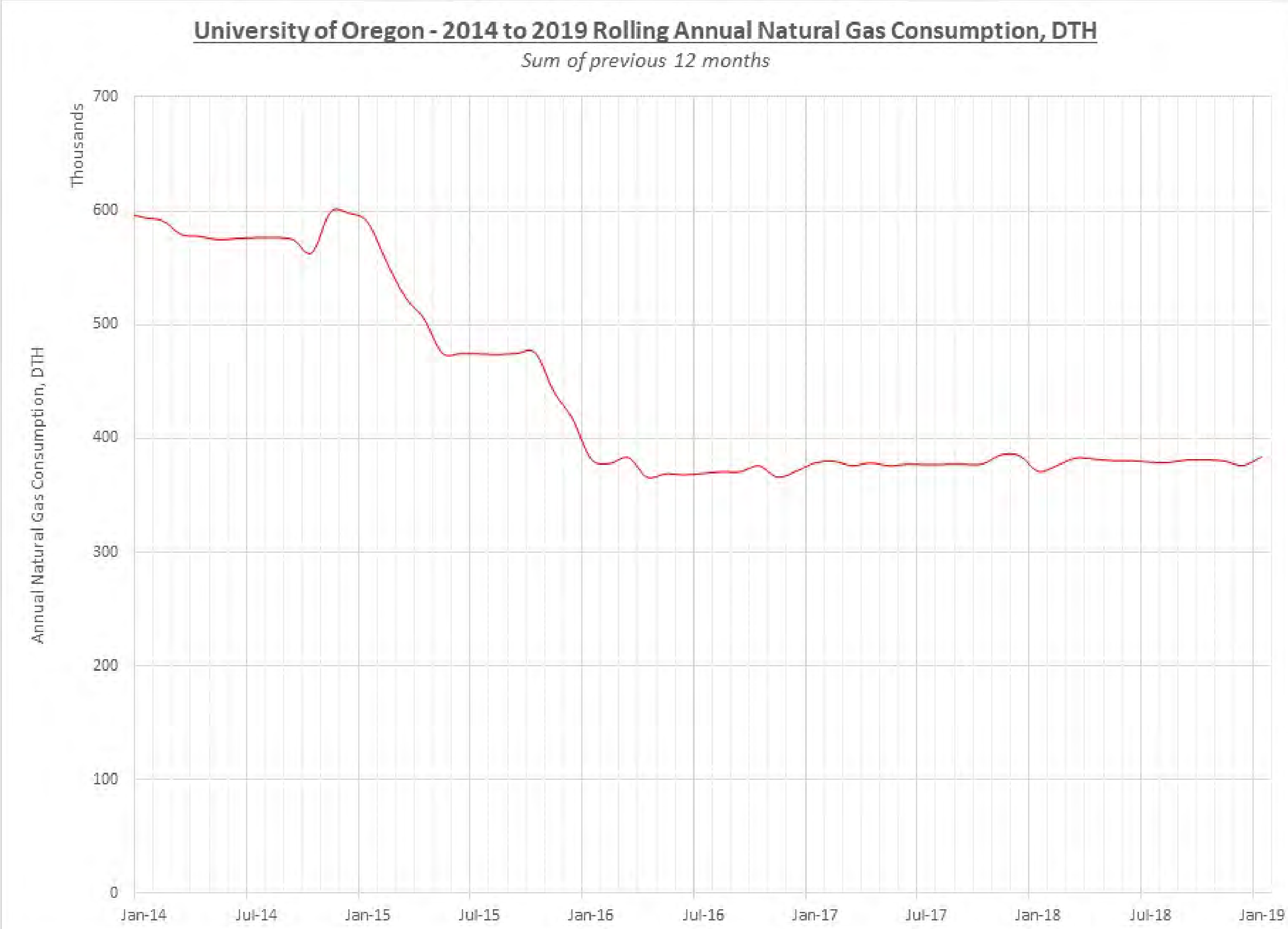
Thanks Boz.

From: Boz Van Houten <bozv@uoregon.edu>
Sent: Friday, March 1, 2019 5:26 PM
To: jcarr@awec.solutions
Cc: Tony Hardenbrook <aharden2@uoregon.edu>; kfrancone@energystrat.com
Subject: RE: AWEC Members' Positive Contributions to Carbon Reduction

Hi, John!
Here is a summary of a UO project that contributes to GHG emission reduction, along with a chart of 5-year Natural Gas rolling annual consumption trend.
Let me know if there are questions.
Thanks!
Boz Van Houten
UO Energy Manager
Campus Planning and Facilities Management
University of Oregon
bozv@uoregon.edu
Desk: 541-346-2223
Mobile:
Safety * Continuity * Efficiency

FY17-18 Steam Tunnel Pipe Re-insulation Project

- Project investment of about $750,000
- Annual reduction in Natural Gas use of about 56,000 DTH.
- Annual reduction in GHG emissions of approximately 30 Metric Tons.



From: Kelly Francone <kfrancone@energystrat.com>
Sent: Monday, February 25, 2019 4:00 PM
To: Eric Fuller <efuller@precastcorp.com>; Eric <Eric.Streicher@airgas.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Rick Stricker <rstricker@baf.com>; Leslie Adams <adamsla@airproducts.com>; Pat Lydon <PLydon@lhs.org>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Pat Ealy <pat.ealy@akzonobel.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Tim Root <timothy.root@axiall.com>; Drew Bryck <drew.m.bryck@boeing.com>; David Elliot <davidelliott@boisebuilding.com>; David Clemens <David.Clemens@darigold.com>; John Bob <John.Bob@am.dynonobel.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Michael Slattery <Michael.Slattery@evrazna.com>; Rob Freres <rtfreres@frereslumber.com>; Aldis.Raisters@gapac.com; Joe Burrell <Joseph.g.burrell@jci.com>; Don Sturtevant <don.sturtevant@simplot.com>; Kevin Rasler <kevin_rasler@iepco.com>; Marty Sedler <marty.sedler@intel.com>; Trudy Slagle <Trudy.Slagle@conagra.com>; Scott Kennedy <scott.kennedy@kaisertwd.com>; Steven Castracane <steven.castracane@linde.com>; Jim Stanton <jstanton@microsoft.com>; Kaiser, Nick <Nick.Kaiser@nippondynawave.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Noel Mak <Noel.Mak@atimetals.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Phil Foss <phil.foss@onsemi.com>; Clay Riding <clayr@nw-iw.com>; Ken Johnson <ken.johnson@recsilicon.com>; mruckwardt@schn.com; Bill Gilmore <billmg@penwool.com>; Stan Jackson <S.Jackson@shell.com>; Marcie Peters <marcie.peters@solvay.com>; Nick Avenetti <nick@perlite.com>; David Jones <david.jones@swansongroup.biz>; Ma <Mark.Brown@teck.com>; Tony Hardenbrook <aharden2@uoregon.edu>; Bruce Martin <bruce.martin@westrock.com>; Daryll Fuentes <dfuentes@usg.com>; David Barge <DABarge@marathonpetroleum.com>; Sarah Schack <sschack@timberproducts.com>
Cc: John Carr <jcarr@awec.solutions>; Ed Finklea <efinklea@awec.solutions>
Subject: AWEC Members' Positive Contributions to Carbon Reduction

AWEC Members,

Industrial energy users face significant risk from the carbon emission and greenhouse gas initiatives that continue to be on the forefront of the Oregon and Washington administrations and legislatures. We believe it is time to update our members' collective work on reducing energy usage and emissions, the dollars invested, and the resulting GHG reductions.

The energy cost implications of potential carbon policies to industry in the Northwest are literally hundreds of millions of dollars. We believe AWEC should respond with as positive of a message as possible regarding what our members are doing on their own to reduce their carbon footprint.

Based on that observation, I would ask each of you to send me a summary of steps (accomplishments) your company has taken in the last five years to improve the energy efficiency of your processes and to reduce your carbon footprint in Oregon and Washington. I suspect some of you have appreciably reduced your carbon footprint in the last few years, or possibly achieved carbon-neutrality.

Rest assured we will only use this information in aggregate form.

Specifically, we are requesting:

Total dollars invested;

Electric (kWH) and /or natural gas (MMBTu) energy saved, from energy efficiency projects;

Quantity of CO2 emissions reduced:

Process improvements resulting in fewer emissions from combusted fossil fuels; and

Investments in renewable energy at your facilities or green power purchases.

Please include the number of employees at each of your facilities in both states as those numbers are useful in our work at the legislature.

If the information is already easily accessible at your website, feel free to send us the link to the appropriate page or pages.

If possible, please send your information to me by Friday, March 1st!

Once we have your collective information, we'll add it to the AWEC website. We will also develop handouts that can be used with legislators and others.

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell:
Website: http://www.awec.solutions
E-mail: jcarr@awec.solutions

From: John Carr <jcarr@awec.solutions>
Sent time: 03/04/2019 11:54:51 AM
To: Tony Hardenbrook
Subject: Re: AWEC Membership Follow up

Will do. J

Sent from my iPhone

On Mar 4, 2019, at 11:45 AM, Tony Hardenbrook <aharden2@uoregon.edu> wrote:

John,

Can you please send a copy of the AWEC invoice to me? Thanks.

Also, following up our previous emails, please ensure University of Oregon is not listed as a AWEC member in AWEC communications regarding state legislation. UO must remain neutral in issues involving state legislation.

I will be at the conference on Wednesday, looking forward to meeting you there.

R/
Tony

Tony Hardenbrook
Director of Utilities and Energy
Campus Planning and Facilities Management
University of Oregon
aharden2@uoregon.edu
541-346-9007

Safety * Continuity * Efficiency

From:	John Carr <jcarr@awec.solutions>
Sent time:	03/04/2019 11:54:22 AM
To:	Kelly Francone <kfrancone@energystrat.com>
Cc:	Tony Hardenbrook
Subject:	Fwd: AWEC Membership Follow up

Hi Kelly, could you get Tony the invoice? Thanks, J

Sent from my iPhone

Begin forwarded message:

> **From:** Tony Hardenbrook <aharden2@uoregon.edu>
> **Date:** March 4, 2019 at 11:45:04 AM PST
> **To:** John Carr <jcarr@awec.solutions>
> **Subject: AWEC Membership Follow up**
>
> John,
>
> Can you please send a copy of the AWEC invoice to me? Thanks.
>
> Also, following up our previous emails, please ensure University of Oregon is not listed as a AWEC member in AWEC communications regarding state legislation. UO must remain neutral in issues involving state legislation.
>
> I will be at the conference on Wednesday, looking forward to meeting you there.
>
> R/
> Tony
>
> Tony Hardenbrook
> Director of Utilities and Energy
> Campus Planning and Facilities Management
> University of Oregon
> aharden2@uoregon.edu
> 541-346-9007
>
> ***Safety * Continuity * Efficiency***

From: John Carr <jcarr@awec.solutions>

Sent time: 03/04/2019 12:56:01 PM

To: Aldis Raisters <Aldis.Raisters@gapac.com>; Alex Koleber; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bill Gillmore <billmg@penwool.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <WittmannConsultingLLC@outlook.com>; Calli Daly <calli.daly@kochps.com>; Chad Sorber <sorber@ohsu.edu>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <Chris_h@columbiasteel.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leone <cynthia.leon@ipaper.com>; Dave Post <Dave.Post@wahchang.com>; David Clemens <david.clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Tobin <DavidTobin@boisepaper.com>; Dean Gallinger <dean.m.gallinger@boeing.com>; Desiree Higgins; Don Hendricksen <donald.j.hendrickson@boeing.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <Drew.m.bryck@boeing.com>; Drew Gilpin <Drew.Gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@pccstructurals.com>; Eric Streicher <Eric.Streicher@airgas.com>; Gary Collison <gcollison@pccstructurals.com>; Gary Londo <gary.j.londo@boeing.com>; James Price <JaDPrice@gapac.com>; Jason Hakes <jason.c.hakes@intel.com>; Jeff Steed <jeff.steed@northwesthardwoods.com>; Jena Hackett <Jena.Hackett@ipaper.com>; Jenny Dresler <jenny@pacounsel.org>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; Josh D. Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Karen Vaughn <Karen.Vaughn@gapac.com>; Kelly Francone <kfrancone@energystrat.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Mark Dunn <mark.dunn@simplot.com>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Martha Cox <Martha_C@columbiasteel.com>; Marty Sedler <marty.sedler@intel.com>; Mary Catherine McAleer <marycatherine.mcaleer@weyerhaeuser.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <Matt.Upmeyer@lambweston.com>; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <mkuhn@westrock.com>; Michael Slattery <Michael.slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Nick Avenetti <nick@perlite.com>; Noel Mak <Noel.Mak@atimetals.com>; Pat Lydon <plydon@lhs.org>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac.com>; Richard White <richard.a.white7@boeing.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.beaver@weyerhaeuser.com>; Samantha Julian <Samanthaj@pacounsel.org>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <sgutting@energystrat.com>; Skyler Mlasko <Skyler.Mlasko@northwesthardwoods.com>; Spiro Xenos <spiro.e.xenos@boeing.com>; Steven Castracane <steven.castracane@linde.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tony Hardenbrook; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; Willaim McSherry <william.mcsherry@boeing.com>

Subject: AWEC Oregon Legislative Update

Oregon AWEC members,

Please find attached the Oregon legislative update from our lobbysists at PAC Counsel.

Regards,

John

--

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell:
Website: http://www.awec.solutions
E-mail: jcarr@awec.solutions

From: John Carr <jcarr@awec.solutions>
Sent time: 03/13/2019 07:06:17 AM
To: Tony Hardenbrook
Subject: Invoice request

Hi Tony,

Just following up on my voice mail message yesterday.

Have you received an quarterly invoice from AWEC?

Thanks,

John

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell:
Website: https://www.awec.solutions/
E-mail: jcarr@awec.solutions

From: John Carr <jcarr@awec.solutions>

Sent time: 03/11/2019 02:15:56 PM

To: Aldis Raisters <Aldis.Raisters@gapac.com>; Alex Koleber; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bill Gillmore <billmg@penwool com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <WittmannConsultingLLC@outlook.com>; Calli Daly <calli.daly@kochps.com>; Chad Sorber <sorber@ohsu.edu>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <Chris_h@columbiasteel.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leone <cynthia.leon@ipaper.com>; Dave Post <Dave.Post@wahchang.com>; David Clemens <david.clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Tobin <DavidTobin@boisepaper.com>; Dean Gallinger <dean.m.gallinger@boeing.com>; Desiree Higgins; Don Hendricksen <donald.j.hendrickson@boeing.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <Drew.m.bryck@boeing.com>; Drew Gilpin <Drew.Gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@pccstructurals.com>; Eric Streicher <Eric.Streicher@airgas.com>; Gary Collison <gcollison@pccstructurals.com>; Gary Londo <gary.j.londo@boeing.com>; James Price <JaDPrice@gapac.com>; Jason Hakes <jason.c.hakes@intel.com>; Jeff Steed <jeff.steed@northwesthardwoods.com>; Jena Hackett <Jena.Hackett@ipaper.com>; Jenny Dresler <jenny@pacounsel.org>; Jesse Counihan <Jesse.Counihan@ipaper.com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; Josh D. Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Karen Vaughn <Karen.Vaughn@gapac.com>; Kelly Francone <kfrancone@energystrat.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Mark Dunn <mark.dunn@simplot.com>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Martha Cox <Martha_C@columbiasteel.com>; Marty Sedler <marty.sedler@intel.com>; Mary Catherine McAleer <marycatherine.mcaleer@weyerhaeuser.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <Matt.Upmeyer@lambweston.com>; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <mkuhn@westrock.com>; Michael Slattery <Michael.slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Nick Avenetti <nick@perlite.com>; Noel Mak <Noel.Mak@atimetals.com>; Pat Lydon <plydon@lhs.org>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac.com>; Richard White <richard.a.white7@boeing com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.beaver@weyerhaeuser.com>; Samantha Julian <Samanthaj@pacounsel.org>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <sgutting@energystrat.com>; Skyler Mlasko <Skyler.Mlasko@northwesthardwoods.com>; Spiro Xenos <spiro.e.xenos@boeing.com>; Steven Castracane <Steven.castracane@messer-us.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tony Hardenbrook; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Wes Hill <Wes.Hill@gapac.com>; Willaim McSherry <william mcsherry@boeing.com>; Jeff Burks <jburks@energystrat.com>

Subject: AWEC Oregon Weekly Legislative Update

Attachments: AWEC Oregon Legislative Update March 11, 2019.docx

---

Oregon AWEC members,

Please find attached the weekly update from our lobbyists at PAC Counsel.

Regards,

John

--

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell: [redacted]
Website: http://www.awec.solutions
E-mail: jcarr@awec.solutions

Oregon Weekly Report

March 11, 2019

The Oregon legislature finished week number seven. The news in the capitol this week centered around Senate President Peter Courtney announcing he was taking a 10-day medical leave of absence. President Courtney has been a strong proponent of advancing a bill around cap-and-trade, but has a history of working to moderate legislation where possible. It is unclear what will happen next and how his absence may impact the cap-and-trade discussion.

What Happened This Week at the Oregon Capitol

- **Carbon:** This week the committee didn't meet on Monday. Legislators met on Friday for an informational hearing on energy efficiency and assistance for low income Oregonians. Claire Seguin, Assistant Director for the Oregon Housing and Community Services, was invited to present. According to the presentation, 73,763 households receive some sort of assistance. The report highlighted that energy efficiency could significantly reduce the energy burden across the board – but could cost nearly $350 million a year to help low-income Oregonians become more energy efficient. We anticipate the committee will hear more informational material as key leaders work to craft omnibus amendments over the next couple of weeks.

- **Senate Environment and Natural Resources:** Last week, the Senate committee held a hearing on SB 508. Legislation specifies that electricity generated by hydroelectric facilities or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard. This concept has been pushed unsuccessfully for years. Environmental advocates have long opposed adding hydro. During the hearing, Senator Dembrow indicated an interest in holding a work group after session to discuss where we want the RPS to go moving forward, indicating that he thought getting to 100 percent renewable would be tricky. This bill won't advance, but we will continue to watch the RPS discussions.

What's Going on This Next Week

- **Carbon:** On Monday, the Joint Carbon Committee will hold an informational hearing. The committee will receive a report from Peter Daugherty, State Forester at the Oregon Department of Forestry, on the Oregon Forest Ecosystem Carbon Report. No agenda has been posted for Friday's meeting and we do not anticipate omnibus amendments this week.

- **Senate Environment and Natural Resources:** This week, the committee is scheduled to hold a work session on SB 98. Legislation would require the PUC to adopt by rule a renewable natural gas program and allow the gas utilities to recover costs. NW Natural has an amendment but they have not shared it with us yet. We are working to get a copy of the NW Natural Gas amendment that will be discussed on Thursday.

- **House Energy and Environment:** This week no bills relating to energy have currently been posted.

Bills AWEC is Tracking

Alliance of Western Energy Consumers

HB 2020	Position	Priority
Bill Info	Oppose	1

Summary: Establishes Carbon Policy Office within Oregon Department of Administrative Services and directs Director of Carbon Policy Office to adopt Oregon Climate Action Program by rule. Modifies statewide greenhouse gas emissions reduction goals. Establishes Joint Committee on Climate Action. Establishes purposes of Oregon Climate Action Program and provisions for investment of moneys received by state as proceeds from auctions conducted under program. Requires program to place cap on greenhouse gas emissions that are regulated emissions and provide market-based mechanism for covered entities to demonstrate compliance with program. Sets forth certain other requirements for program and for rules adopted by Director of Carbon Policy Office related to program. Establishes certain funds. Sets forth requirements for uses of moneys deposited in funds. Authorizes Public Utility Commission to allow rate or rate schedule to include differential rates or to reflect amounts for programs that enable public utilities to assist low-income residential customers. Transfers duties, functions and powers of Environmental Quality Commission and Department of Environmental Quality related to greenhouse gas reporting to Carbon Policy Office. Amends greenhouse gas reporting statute. Repeals Energy Facility Siting Council carbon dioxide emissions standards. Includes provisions for treatment of site certificate conditions affected by repeal of carbon dioxide emissions standards. Provides that provisions related to Carbon Policy Office, Oregon Climate Action Program, investment of certain moneys, Public Utility Commission, transfer of duties, and repeal of Energy Facility Siting Council carbon dioxide emissions standards become operative January 1, 2021. Provides for expedited review of certain questions on Act to Supreme Court upon petition by adversely affected party. Declares emergency, effective on passage.

3/2/19	H - Public Hearing held.
3/1/19	H - Public Hearing held.
2/25/19	H - Public Hearing held.
2/23/19	H - Public Hearing held.
2/22/19	H - Public Hearing held.
2/18/19	H - Public Hearing held.
2/15/19	H - Public Hearing held.
2/11/19	H - Informational Meeting held.
2/8/19	H - Informational Meeting held.
2/4/19	H - First reading. Referred to Speaker's desk.
2/4/19	H - Referred to Carbon Reduction.

HB 5044	**Position**	**Priority**
Bill Info	Oppose	1

Summary: Appropriates moneys from General Fund to Oregon Climate Authority for biennial expenses. Limits biennial expenditures from fees, moneys or other revenues, including Miscellaneous Receipts, but excluding lottery funds and federal funds, collected or received by authority. Limits biennial expenditures by authority from certain lottery moneys. Limits biennial expenditures by authority from federal funds. Authorizes specified nonlimited expenditures. Declares emergency, effective July 1, 2019.

1/23/19 H - Assigned to Subcommittee On Natural Resources.
1/15/19 H - Referred to Ways and Means.
1/14/19 H - First reading. Referred to Speaker's desk.

SB 0089	**Position**	**Priority**
Bill Info	Oppose	1

Summary: Requires Environmental Quality Commission to adopt by rule program for assessing net impacts of state policies and programs for reducing greenhouse gas emissions. Declares emergency, effective on passage.

1/15/19 S - Referred to Environment and Natural Resources.
1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0098	**Position**	**Priority**
Bill Info	Monitor	1

Summary: Requires Public Utility Commission to adopt by rule renewable natural gas program for natural gas utilities to recover prudently incurred qualified investments in meeting certain targets for including renewable natural gas in gas purchases for distribution to retail natural gas customers. Requires commission to adopt rules no later than December 31, 2019. Takes effect on 91st day following adjournment sine die.

3/14/19 S - Work Session scheduled.
2/7/19 S - Public Hearing held.
1/28/19 S - Recommendation: Without recommendation as to passage and be returned to President's desk for referral. Referred to Environment and Natural Resources by order of the President.
1/25/19 S - Work Session held.
1/17/19 S - Referred to Carbon Reduction.
1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0220	**Position**	**Priority**
Bill Info	Oppose	1

Summary: Requires Department of Environmental Quality to conduct study related to greenhouse gas emissions. Sunsets January 2, 2022.

1/15/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0598 **Position** **Priority**

Bill Info Oppose 1

Summary: Changes name of Oregon Global Warming Commission to Oregon Climate Change Commission. Requires commission to appoint executive director. Appropriates moneys to commission for purposes related to executive director of commission. Modifies certain duties of commission and of certain nonvoting members of commission. Modifies certain duties of certain agencies of state government with regard to duties of commission.

1/17/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0636 **Position** **Priority**

Bill Info Monitor 1

Summary: Requires Public Utility Commission to adopt by rule renewable natural gas program for natural gas utilities to recover prudently incurred qualified investments in meeting certain targets for including renewable natural gas in gas purchases for distribution to retail natural gas customers. Requires commission to adopt rules no later than December 31, 2019. Takes effect on 91st day following adjournment sine die.

1/25/19	S - Referred to Environment and Natural Resources.
1/22/19	S - Introduction and first reading. Referred to President's desk.

HB 2093 **Position** **Priority**

Bill Info Monitor 2

Summary: Permits Oregon Department of Administrative Services to contract with other entity, and to participate in, sponsor, conduct or administer cooperative procurements, for purpose of acquiring, installing, maintaining or operating devices or facilities to deliver electricity to public for electric motor vehicles. Specifies that solely for purpose of contracting agency's participating in, sponsoring, conducting or administering cooperative procurement, device or facility for delivering electricity to public for electric motor vehicles is not public improvement. Becomes operative on January 1, 2020. Takes effect on 91st day following adjournment sine die.

1/28/19	H - Public Hearing held.
1/15/19	H - Referred to Rules.
1/14/19	H - First reading. Referred to Speaker's desk.

HB 2242A	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Authorizes Public Utility Commission to consider differential energy burden and other inequities of affordability in rates. Authorizes public utilities to enter agreements to provide financial assistance for organizations to represent in regulatory proceedings before commission interests of low-income **residential** customers and **residential** customers that are members of environmental justice communities. Establishes Office of the Low-Income and Environmental Justice Advocate within commission. Authorizes office to intervene in certain proceedings. **Requires Low-Income and Environmental Justice Advocate to convene advisory group to advise office in discharge of duties. Requires office to report on activities of office to interim committees of Legislative Assembly related to energy no later than December 1, 2021. Directs commission to establish public process for investigating ways to address and mitigate, through nonbypassable means, differential energy burdens on classes of** ***electric company*]** **public utility customers and other inequities of affordability and environmental justice. Requires commission to** ***report findings to interim committees of Legislative Assembly related to energy and business no later than September 15, 2020*]** **incorporate findings into commission's 2020 report to Environmental Justice Task Force and Governor. Sunsets public process January 2, 2021.**

3/4/19	H - Recommendation: Do pass with amendments, be printed A-Engrossed, and be referred to Ways and Means by prior reference.
3/4/19	H - Referred to Ways and Means by prior reference.
2/26/19	H - Work Session held.
1/31/19	H - Public Hearing held.
1/15/19	H - Referred to Energy and Environment with subsequent referral to Ways and Means.
1/14/19	H - First reading. Referred to Speaker's desk.

HB 2322	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Requires Land Conservation and Development Commission to amend statewide land use planning goals related to energy to incorporate development of renewable energy facilities and reduction of greenhouse gas emissions and to match state energy policies.

1/18/19	H - Referred to Energy and Environment.
1/14/19	H - First reading. Referred to Speaker's desk.

HB 2329	Position	Priority
Bill Info	Monitor	2

Summary: Modifies definition of "energy facility" for purposes of regulation of energy facilities by Energy Facility Siting Council. Broadens provisions for types of electric power generating plants that may elect to obtain site certificate from council if otherwise not required to obtain site certificate.

3/5/19 H - Public Hearing held.
2/28/19 H - Public Hearing held.
1/18/19 H - Referred to Energy and Environment.
1/14/19 H - First reading. Referred to Speaker's desk.

HB 2494	Position	Priority
Bill Info	Monitor	2

Summary: Extends operation of public purpose charges until January 1, 2036.

1/18/19 H - Referred to Energy and Environment.
1/14/19 H - First reading. Referred to Speaker's desk.

HB 2611	Position	Priority
Bill Info	Support	2

Summary: Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.

1/18/19 H - Referred to Energy and Environment.
1/14/19 H - First reading. Referred to Speaker's desk.

HB 2618	Position	Priority
Bill Info	Monitor	2

Summary: Requires State Department of Energy to adopt by rule program for providing rebates for purchase, construction or installation of residential and commercial solar electric systems and paired solar and storage systems. Sets forth rebate limits under program. Establishes Rooftop Solar Incentive Fund. Continuously appropriates moneys in fund to department to issue rebates. Limits total amount of rebates issued annually for commercial systems. Appropriates moneys from General Fund to department for deposit in Rooftop Solar Incentive Fund. Requires department to submit annual report on program to Legislative Assembly. Sunsets January 2, 2024. Takes effect on 91st day following adjournment sine die.

2/28/19 H - Public Hearing held.
1/15/19 H - Referred to Energy and Environment with subsequent referral to Ways and Means.
1/14/19 H - First reading. Referred to Speaker's desk.

HB 2791	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Modifies cost recovery formula for site certificate holders. Applies to annual fees due on and after July 1, 2020. Establishes Energy Facility Siting Task Force. Sunsets task force on December 31, 2020. Declares emergency, effective on passage.

1/28/19 H - Referred to Energy and Environment with subsequent referral to Ways and Means.

1/24/19 H - First reading. Referred to Speaker's desk.

HB 2808	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Requires Oregon Business Development Department to establish competitive clean technology sector development grant program. Requires department to award grants to qualified lenders to develop and administer loan programs for funding clean technology sector development projects. Requires certain reporting related to grant program. Establishes Clean Technology Sector Development Fund. Requires moneys deposited in fund to be used for grant program.

2/4/19 H - Referred to Economic Development with subsequent referral to Ways and Means.

1/28/19 H - First reading. Referred to Speaker's desk.

HB 2852	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Authorizes local governments to form authorities for purpose of implementing community choice aggregation programs. Places certain requirements on electric companies and Public Utility Commission related to implementation of community choice aggregation programs. Applies certain renewable portfolio standards to community choice aggregation programs implemented by authorities. Includes authorities in list of persons subject to public purpose charge.

2/4/19 H - First reading. Referred to Speaker's desk.

2/4/19 H - Referred to Energy and Environment with subsequent referral to Ways and Means.

HB 2855	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Modifies general powers of Public Utility Commission.

2/4/19 H - Referred to Energy and Environment.

1/31/19 H - First reading. Referred to Speaker's desk.

HB 2857	Position	Priority
Bill Info	Oppose	2

Summary: Requires eight percent of electricity sold in this state by each electric company that makes sales to 25,000 or more retail electricity consumers to be generated by small-scale renewable energy facilities or certain biomass facilities. Increases, to 100 average megawatts of electricity per year, amount of electricity generated by certified low-impact hydroelectric facilities that may be used to comply with renewable portfolio standards. Establishes, for purposes of public utilities that provide electric power to consumers in this state, additional standards for purchase of energy or energy and capacity from qualifying facilities. Allows person injured by certain violations by public utility related to purchase and sale of energy or energy and capacity to recover treble damages from public utility.

2/4/19 H - Referred to Energy and Environment.

1/31/19 H - First reading. Referred to Speaker's desk.

HB 3025	Position	Priority
Bill Info	Monitor	2

Summary: Requires State Forestry Department to establish Western Oregon Regional Carbon Sink as geographical area and take certain actions regarding area on or before January 1, 2031. Establishes Task Force on Western Oregon Regional Carbon Sink. Sunsets task force on December 31, 2020. Establishes Western Oregon Regional Carbon Sink Advisory Board. Declares emergency, effective on passage.

2/25/19 H - Referred to Natural Resources.

2/21/19 H - First reading. Referred to Speaker's desk.

HB 3027	Position	Priority
Bill Info	Monitor	2

Summary: Authorizes State Treasurer to issue general obligation bonds under Article XI-E of Oregon Constitution in amount that produces $500 million in net proceeds for Strategic Carbon Sequestration and Forestry Sustainability Program. Directs State Forestry Department to establish Strategic Carbon Sequestration and Forestry Sustainability Program.

2/27/19 H - Referred to Revenue with subsequent referral to Ways and Means.

2/21/19 H - First reading. Referred to Speaker's desk.

HB 5017	Position	Priority
Bill Info	Monitor	2

Summary: Appropriates moneys from General Fund to Department of Environmental Quality for certain biennial expenses. Limits biennial expenditures from fees, moneys or other revenues, including Miscellaneous Receipts, specified bond proceeds and specified federal funds, but excluding lottery funds and other federal funds, collected or received by department. Limits biennial expenditures from lottery moneys allocated from Parks and Natural Resources Fund to department. Authorizes specified nonlimited expenditures. Limits certain biennial expenditures by department from federal funds. Declares emergency, effective July 1, 2019.

2/21/19	H - Public Hearing held.
2/20/19	H - Public Hearing held.
2/19/19	H - Public Hearing held.
2/18/19	H - Public Hearing held.
1/23/19	H - Assigned to Subcommittee On Natural Resources.
1/15/19	H - Referred to Ways and Means.
1/14/19	H - First reading. Referred to Speaker's desk.

SB 0038	Position	Priority
Bill Info	Support	2

Summary: Modifies provisions for treatment of renewable energy certificates issued for generation of thermal energy.

3/7/19	H - Public Hearing held.
2/13/19	H - Referred to Energy and Environment.
2/6/19	H - First reading. Referred to Speaker's desk.
2/5/19	S - Third reading. Carried by Prozanski. Passed.
1/31/19	S - Recommendation: Do pass.
1/31/19	S - Second reading.
1/29/19	S - Work Session held.
1/22/19	S - Public Hearing held.
1/15/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0068	Position	Priority
Bill Info	No Position	2

Summary: Increases annual fee imposed on public utilities and telecommunications providers for purpose of defraying costs of Public Utility Commission. Declares emergency, effective on passage.

3/6/19	S - Assigned to Subcommittee On Transportation and Economic Development.
2/4/19	S - Recommendation: Without recommendation as to passage and be referred to Ways and Means.
2/4/19	S - Referred to Ways and Means by order of the President.
1/31/19	S - Public Hearing and Work Session held.
1/15/19	S - Referred to Business and General Government.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0091	**Position**	**Priority**
Bill Info	Oppose	2

Summary: Requires at least 50 percent of public purpose charge funds paid to nongovernmental entity to be invested in providing incentives to retail electricity customers for accelerating transportation electrification. Specifies that accelerating transportation electrification qualifies as new market transformation effort for purposes of public purpose charge expenditure standard.

1/15/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0267	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Transfers duties, functions and powers of State Department of Energy related to issuance of loans for small scale local energy projects to Oregon Business Development Department. Becomes operative on January 1, 2020. Requires loan contracts to make loans payable in full in event that Director of Oregon Business Development Department formally declares default of payment of loan or that project that is subject of loan fails to meet standards and criteria for projects. Becomes operative on January 1, 2020. Repeals certain provisions related to small scale local energy projects. Abolishes funds associated with provisions. Transfers moneys from abolished funds to Small Scale Local Energy Project Loan Fund. Appropriates moneys from General Fund to Oregon Business Development Department for purposes of Act. Repeals energy efficiency and sustainable technology loan program. Requires State Department of Energy to conduct audit of certain department activities. Declares emergency, effective on passage.

1/15/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0451	Position	Priority
Bill Info	Monitor	2

Summary: Establishes eligibility for renewable energy certificates for facilities that generate electricity from direct combustion of municipal solid waste and became operational before January 1, 1995, if such facilities register with Western Renewable Energy Generation Information System at any time.

3/12/19 S - Public Hearing Scheduled.

1/28/19 S - Recommendation: Without recommendation as to passage and be returned to President's desk for referral. Referred to Environment and Natural Resources by order of the President.

1/25/19 S - Work Session held.

1/17/19 S - Referred to Carbon Reduction.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0503	Position	Priority
Bill Info	Support	2

Summary: Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.

1/16/19 S - Referred to Environment and Natural Resources.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0508	Position	Priority
Bill Info	Support	2

Summary: Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.

3/7/19 S - Public Hearing held.

1/16/19 S - Referred to Environment and Natural Resources.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0712	Position	Priority
Bill Info	Monitor	2

Summary: Reduces, to 0.15 percent, percentage of energy resource supplier's gross operating revenue that annual energy resource supplier assessment may not exceed.

1/30/19 S - Referred to Environment and Natural Resources.

1/29/19 S - Introduction and first reading. Referred to President's desk.

SB 0713	Position	Priority
Bill Info	Monitor	2

Summary: Requires State Department of Energy to conduct study on department's contributions to leading State of Oregon to safe, clean and sustainable energy future.

1/30/19 S - Referred to Environment and Natural Resources.

1/29/19 S - Introduction and first reading. Referred to President's desk.

SB 0714	Position	Priority
Bill Info	Monitor	2

Summary: Requires State Department of Energy to conduct study related to Energy Facility Siting Council and report findings to interim committees of Legislative Assembly by September 15, 2021.

1/30/19 S - Referred to Environment and Natural Resources.

1/29/19 S - Introduction and first reading. Referred to President's desk.

SB 0715	Position	Priority
Bill Info	Monitor	2

Summary: Requires State Department of Energy to conduct study related to Energy Facility Siting Council and report findings to interim committees of Legislative Assembly by September 15, 2021.

1/30/19 S - Referred to Environment and Natural Resources.

1/29/19 S - Introduction and first reading. Referred to President's desk.

SB 5534	Position	Priority
Bill Info	Monitor	2

Summary: Limits certain biennial expenditures from fees, moneys or other revenues, including Miscellaneous Receipts, but excluding lottery funds and federal funds, collected or received by Public Utility Commission of Oregon. Limits biennial expenditures by commission from federal funds. Authorizes specified nonlimited expenditures. Declares emergency, effective July 1, 2019.

1/30/19 S - Public Hearing held.

1/23/19 S - Assigned to Subcommittee On Transportation and Economic Development.

1/15/19 S - Referred to Ways and Means.

1/14/19 S - Introduction and first reading. Referred to President's desk.

From: John Carr <jcarr@awec.solutions>
Sent time: 03/04/2019 12:58:17 PM
To: Aldis Raisters <Aldis.Raisters@gapac.com>; Alex Koleber; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bill Gillmore <billmg@penwool com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <WittmannConsultingLLC@outlook.com>; Calli Daly <calli.daly@kochps.com>; Chad Sorber <sorber@ohsu.edu>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <Chris_h@columbiasteel.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leone <cynthia.leon@ipaper.com>; Dave Post <Dave.Post@wahchang.com>; David Clemens <david.clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Tobin <DavidTobin@boisepaper.com>; Dean Gallinger <dean.m.gallinger@boeing.com>; Desiree Higgins; Don Hendricksen <donald.j.hendrickson@boeing.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <Drew.m.bryck@boeing.com>; Drew Gilpin <Drew.Gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@pccstructurals.com>; Eric Streicher <Eric.Streicher@airgas.com>; Gary Collison <gcollison@pccstructurals.com>; Gary Londo <gary.j.londo@boeing.com>; James Price <JaDPrice@gapac.com>; Jason Hakes <jason.c.hakes@intel.com>; Jeff Steed <jeff.steed@northwesthardwoods.com>; Jena Hackett <Jena.Hackett@ipaper.com>; Jenny Dresler <jenny@pacounsel.org>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; Josh D. Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Karen Vaughn <Karen.Vaughn@gapac.com>; Kelly Francone <kfrancone@energystrat.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Mark Dunn <mark.dunn@simplot.com>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Martha Cox <Martha_C@columbiasteel.com>; Marty Sedler <marty.sedler@intel.com>; Mary Catherine McAleer <marycatherine.mcaleer@weyerhaeuser.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <Matt.Upmeyer@lambweston.com>; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <mkuhn@westrock.com>; Michael Slattery <Michael.slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Nick Avenetti <nick@perlite.com>; Noel Mak <Noel.Mak@atimetals.com>; Pat Lydon <plydon@lhs.org>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac.com>; Richard White <richard.a.white7@boeing.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.beaver@weyerhaeuser.com>; Samantha Julian <Samanthaj@pacounsel.org>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <sgutting@energystrat.com>; Skyler Mlasko <Skyler.Mlasko@northwesthardwoods.com>; Spiro Xenos <spiro.e.xenos@boeing.com>; Steven Castracane <steven.castracane@linde.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tony Hardenbrook; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; Willaim McSherry <william.mcsherry@boeing.com>
Subject: Re: AWEC Oregon Legislative Update
Attachments: AWEC Oregon Legislative Update March 4, 2019.docx

---

Apologies the attachment is included in this email.

On Mon, Mar 4, 2019 at 1:56 PM John Carr <jcarr@awec.solutions> wrote:

> Oregon AWEC members,
>
> Please find attached the Oregon legislative update from our lobbysists at PAC Counsel.
>
> Regards,
>
> John
>
> --
>
> John Carr
> Executive Director
> Alliance of Western Energy Consumers
> Office: 971.544.7169
> Cell: [redacted]
> Website: http://www.awec.solutions
> E-mail: jcarr@awec.solutions

--

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell: [redacted]
Website: http://www.awec.solutions
E-mail: jcarr@awec.solutions

Oregon Weekly Report

March 3, 2019

The Oregon legislature wrapped up week number six. Legislators continued public hearings on cap-and-trade and their final weekend road show. There is a lot of discussion at the capitol this week of how cap-and-trade policies would impact the transportation package that was approved in 2017. Legislators are also beginning to quietly question if they can pass both a tax increase to fund education and a cap-and-trade policy that will have substantial cost impacts to individuals and businesses.

What Happened This Week at the Oregon Capitol

- **Carbon:** On Monday, the Joint Committee on Carbon Reduction held a public hearing at the state capitol where participants testified via video conference from locations in Baker City and Newport. Baker City had a large turnout of potential impacted workers, farmers, and truckers, and made a very compelling case that this program would cost them their jobs and livelihood. Testimony from the coast was more split with supporters and opponents. On Friday and Saturday, the committee traveled to The Dalles and Bend, respectively, to hear from hundreds of Oregonians about the potential impacts of the cap-and-trade bill. In The Dalles opponents outnumbered the proponents and it was called out that many there to support the bill drove from Portland. Bend leaned with supporters of the bill, but all in all a good turnout across the state in opposition to the bill.

  AWEC also calculated the numbers and potential impact of the bill as drafted. Even though AWEC members' facilities are responsible for only a small amount of greenhouse gas (GHG) emissions, HB 2020 will impose disproportionate costs on AWEC members. We estimate the cumulative compliance and energy cost impacts on AWEC facilities will exceed $350 million by 2030 and rise to over $1.5 billion in 2040. HB 2020 will increase the costs of electricity and natural gas to all consumers, including AWEC members facilities.

  Twelve AWEC facilities are designated as EITE and initially receive no-cost allowances to offset the costs of compliance. However, the distribution of allowances is reduced each year starting in 2022. AWEC facilities need to buy allowances to comply with the regulation starting in 2022. AWEC members' covered facilities are responsible for less than 3 percent of Oregon's statewide GHG emissions, but they would be required to pay many millions of dollars in compliance costs each year.

Compliance costs for those 12 facilities are estimated to be at:

- $7.1 million by 2025
- $37.3 million by 2030
- $70.6 million by 2035
- $106.8 million by 2040

The cumulative costs of these 12 AWEC facilities purchasing allowances is estimated to exceed $4.1 million by 2025 and grow to over $1 billion by 2040. Compliance costs identified above do not include indirect electricity cost increases.

All AWEC member facilities, even those designated as EITE, are exposed to electricity price increases in either the near- or long-term. The cost impact will vary by company depending on their electricity provider. Direct Access Customers get hit the hardest – because their wholesale electricity suppliers don't get the same allowances that IOUs receive – even though they are required to meet the same RPS requirements. Price impacts will begin immediately for AWEC members on direct access, amounting to $4.3 million in 2021 alone. Increased electricity costs for all AWEC electricity customers increase sharply in later years as free allowances decline.

- $4.3 million in 2021
- $7.5 million in 2025
- $11.2 million in 2030
- $16.4 million in 2035
- $25.5 million in 2040

AWEC member facilities not covered by HB 2020 may be significantly impacted by higher natural gas costs if they are ineligible for free allowances. The cost of allowances will be passed on through higher natural gas costs that affect 25 percent, or 5.8 MMBtu, of natural gas consumed by AWEC members facilities. Natural gas prices are estimated to increase 29 percent in 2021. By 2030, industrial customers will be a 60 percent increase in natural gas prices.

Increases in natural gas costs for AWEC members will be immediate and are estimated to increase each year the cap-and-trade regulation is in place.

- $6.7 million in 2021
- $11.3 million in 2025
- $21.9 million in 2030
- $26.7 million in 2035
- $33.7 million in 2040

Between 2021 and 2040 estimates show that AWEC members will spend an addition $410 million in increased natural gas costs due to HB 2020.

Public Purpose Charge: We met with Rep. Helm this week about legislation that would extend the public purpose charge from 2026 to 2036. During the meeting, he told us that he did not plan to move bills that would change the public purpose charge during the 2019 session – and while there is so much debate going on around a cap-and-trade program.

What's Going on This Next Week

- **Carbon:** Following the weekend roadshows, there is no current meeting of the Joint Committee on Carbon for Monday, March 4, 2019. We know that the committee is working with the Governor's office on potential amendments, and we anticipate that much of the discussion over the next month will center around potential amendments to HB 2020.

- **Senate Environment and Natural Resources:** The committee will hear Senate Bill 508, that would specify the electricity generated by hydro facility or other equipment that generates electricity for hydro may be used to qualify with the renewable portfolio standard.

- **House Energy and Environment:** The committee will hear HB 2329 that modifies the definition of an energy facility for the purpose of regulation of energy facilities by the Energy Facility Siting Council.

Bills AWEC is Tracking

Alliance of Western Energy Consumers

HB 2020	Position	Priority
Bill Info	Oppose	1

Summary: Establishes Carbon Policy Office within Oregon Department of Administrative Services and directs Director of Carbon Policy Office to adopt Oregon Climate Action Program by rule. Modifies statewide greenhouse gas emissions reduction goals. Establishes Joint Committee on Climate Action. Establishes purposes of Oregon Climate Action Program and provisions for investment of moneys received by state as proceeds from auctions conducted under program. Requires program to place cap on greenhouse gas emissions that are regulated emissions and provide market-based mechanism for covered entities to demonstrate compliance with program. Sets forth certain other requirements for program and for rules adopted by Director of Carbon Policy Office related to program. Establishes certain funds. Sets forth requirements for uses of moneys deposited in funds. Authorizes Public Utility Commission to allow rate or rate schedule to include differential rates or to reflect amounts for programs that enable public utilities to assist low-income residential customers. Transfers duties, functions and powers of Environmental Quality Commission and Department of Environmental Quality related to greenhouse gas reporting to Carbon Policy Office. Amends greenhouse gas reporting statute. Repeals Energy Facility Siting Council carbon dioxide emissions standards. Includes provisions for treatment of site certificate conditions affected by repeal of carbon dioxide emissions standards. Provides that provisions related to Carbon Policy Office, Oregon Climate Action Program, investment of certain moneys, Public Utility Commission, transfer of duties, and repeal of Energy Facility Siting Council carbon dioxide emissions standards become operative January 1, 2021. Provides for expedited review of certain questions on Act to Supreme Court upon petition by adversely affected party. Declares emergency, effective on passage.

3/2/19	H - Public Hearing held.
3/1/19	H - Public Hearing held.
2/25/19	H - Public Hearing held.
2/23/19	H - Public Hearing held.
2/22/19	H - Public Hearing held.
2/18/19	H - Public Hearing held.
2/15/19	H - Public Hearing held.
2/11/19	H - Informational Meeting held.
2/8/19	H - Informational Meeting held.
2/4/19	H - First reading. Referred to Speaker's desk.
2/4/19	H - Referred to Carbon Reduction.

HB 5044 **Position** **Priority**

Bill Info Oppose 1

Summary: Appropriates moneys from General Fund to Oregon Climate Authority for biennial expenses. Limits biennial expenditures from fees, moneys or other revenues, including Miscellaneous Receipts, but excluding lottery funds and federal funds, collected or received by authority. Limits biennial expenditures by authority from certain lottery moneys. Limits biennial expenditures by authority from federal funds. Authorizes specified nonlimited expenditures. Declares emergency, effective July 1, 2019.

1/23/19 H - Assigned to Subcommittee On Natural Resources.

1/15/19 H - Referred to Ways and Means.

1/14/19 H - First reading. Referred to Speaker's desk.

SB 0089 **Position** **Priority**

Bill Info Oppose 1

Summary: Requires Environmental Quality Commission to adopt by rule program for assessing net impacts of state policies and programs for reducing greenhouse gas emissions. Declares emergency, effective on passage.

1/15/19 S - Referred to Environment and Natural Resources.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0098 **Position** **Priority**

Bill Info Monitor 1

Summary: Requires Public Utility Commission to adopt by rule renewable natural gas program for natural gas utilities to recover prudently incurred qualified investments in meeting certain targets for including renewable natural gas in gas purchases for distribution to retail natural gas customers. Requires commission to adopt rules no later than December 31, 2019. Takes effect on 91st day following adjournment sine die.

3/14/19 S - Work Session scheduled.

2/7/19 S - Public Hearing held.

1/28/19 S - Recommendation: Without recommendation as to passage and be returned to President's desk for referral. Referred to Environment and Natural Resources by order of the President.

1/25/19 S - Work Session held.

1/17/19 S - Referred to Carbon Reduction.

1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0220 **Position** **Priority**

Bill Info Oppose 1

Summary: Requires Department of Environmental Quality to conduct study related to greenhouse gas emissions. Sunsets January 2, 2022.

1/15/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0598 **Position** **Priority**

Bill Info Oppose 1

Summary: Changes name of Oregon Global Warming Commission to Oregon Climate Change Commission. Requires commission to appoint executive director. Appropriates moneys to commission for purposes related to executive director of commission. Modifies certain duties of commission and of certain nonvoting members of commission. Modifies certain duties of certain agencies of state government with regard to duties of commission.

1/17/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0636 **Position** **Priority**

Bill Info Monitor 1

Summary: Requires Public Utility Commission to adopt by rule renewable natural gas program for natural gas utilities to recover prudently incurred qualified investments in meeting certain targets for including renewable natural gas in gas purchases for distribution to retail natural gas customers. Requires commission to adopt rules no later than December 31, 2019. Takes effect on 91st day following adjournment sine die.

1/25/19	S - Referred to Environment and Natural Resources.
1/22/19	S - Introduction and first reading. Referred to President's desk.

HB 2093 **Position** **Priority**

Bill Info Monitor 2

Summary: Permits Oregon Department of Administrative Services to contract with other entity, and to participate in, sponsor, conduct or administer cooperative procurements, for purpose of acquiring, installing, maintaining or operating devices or facilities to deliver electricity to public for electric motor vehicles. Specifies that solely for purpose of contracting agency's participating in, sponsoring, conducting or administering cooperative procurement, device or facility for delivering electricity to public for electric motor vehicles is not public improvement. Becomes operative on January 1, 2020. Takes effect on 91st day following adjournment sine die.

1/28/19	H - Public Hearing held.
1/15/19	H - Referred to Rules.
1/14/19	H - First reading. Referred to Speaker's desk.

HB 2242	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Authorizes Public Utility Commission to consider differential energy burden and other inequities of affordability in rates. Authorizes public utilities to enter agreements to provide financial assistance for organizations to represent in regulatory proceedings before commission interests of low-income customers and customers that are members of environmental justice communities. Establishes Office of the Low-Income and Environmental Justice Advocate within commission. Authorizes office to intervene in certain proceedings. Directs commission to establish public process for investigating ways to address and mitigate differential energy burdens on classes of electric company customers and other inequities of affordability. Requires commission to report findings to interim committees of Legislative Assembly related to energy and business no later than September 15, 2020. Sunsets public process January 2, 2021.

2/26/19	H - Work Session held.
1/31/19	H - Public Hearing held.
1/15/19	H - Referred to Energy and Environment with subsequent referral to Ways and Means.
1/14/19	H - First reading. Referred to Speaker's desk.

HB 2322	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Requires Land Conservation and Development Commission to amend statewide land use planning goals related to energy to incorporate development of renewable energy facilities and reduction of greenhouse gas emissions and to match state energy policies.

1/18/19	H - Referred to Energy and Environment.
1/14/19	H - First reading. Referred to Speaker's desk.

HB 2329	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Modifies definition of "energy facility" for purposes of regulation of energy facilities by Energy Facility Siting Council. Broadens provisions for types of electric power generating plants that may elect to obtain site certificate from council if otherwise not required to obtain site certificate.

3/5/19	H - Public Hearing scheduled.
2/28/19	H - Public Hearing held.
1/18/19	H - Referred to Energy and Environment.
1/14/19	H - First reading. Referred to Speaker's desk.

HB 2494	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Extends operation of public purpose charges until January 1, 2036.

1/18/19 H - Referred to Energy and Environment.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2611	Position	Priority
Bill Info	Support	2

Summary: Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.

1/18/19 H - Referred to Energy and Environment.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2618	Position	Priority
Bill Info	Monitor	2

Summary: Requires State Department of Energy to adopt by rule program for providing rebates for purchase, construction or installation of residential and commercial solar electric systems and paired solar and storage systems. Sets forth rebate limits under program. Establishes Rooftop Solar Incentive Fund. Continuously appropriates moneys in fund to department to issue rebates. Limits total amount of rebates issued annually for commercial systems. Appropriates moneys from General Fund to department for deposit in Rooftop Solar Incentive Fund. Requires department to submit annual report on program to Legislative Assembly. Sunsets January 2, 2024. Takes effect on 91st day following adjournment sine die.

2/28/19 H - Public Hearing held.

1/15/19 H - Referred to Energy and Environment with subsequent referral to Ways and Means.

1/14/19 H - First reading. Referred to Speaker's desk.

HB 2791	Position	Priority
Bill Info	Monitor	2

Summary: Modifies cost recovery formula for site certificate holders. Applies to annual fees due on and after July 1, 2020. Establishes Energy Facility Siting Task Force. Sunsets task force on December 31, 2020. Declares emergency, effective on passage.

1/28/19 H - Referred to Energy and Environment with subsequent referral to Ways and Means.

1/24/19 H - First reading. Referred to Speaker's desk.

HB 2808	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Requires Oregon Business Development Department to establish competitive clean technology sector development grant program. Requires department to award grants to qualified lenders to develop and administer loan programs for funding clean technology sector development projects. Requires certain reporting related to grant program. Establishes Clean Technology Sector Development Fund. Requires moneys deposited in fund to be used for grant program.

2/4/19 H - Referred to Economic Development with subsequent referral to Ways and Means.

1/28/19 H - First reading. Referred to Speaker's desk.

HB 2852	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Authorizes local governments to form authorities for purpose of implementing community choice aggregation programs. Places certain requirements on electric companies and Public Utility Commission related to implementation of community choice aggregation programs. Applies certain renewable portfolio standards to community choice aggregation programs implemented by authorities. Includes authorities in list of persons subject to public purpose charge.

2/4/19 H - First reading. Referred to Speaker's desk.

2/4/19 H - Referred to Energy and Environment with subsequent referral to Ways and Means.

HB 2855	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Modifies general powers of Public Utility Commission.

2/4/19 H - Referred to Energy and Environment.

1/31/19 H - First reading. Referred to Speaker's desk.

HB 2857	**Position**	**Priority**
Bill Info	Oppose	2

Summary: Requires eight percent of electricity sold in this state by each electric company that makes sales to 25,000 or more retail electricity consumers to be generated by small-scale renewable energy facilities or certain biomass facilities. Increases, to 100 average megawatts of electricity per year, amount of electricity generated by certified low-impact hydroelectric facilities that may be used to comply with renewable portfolio standards. Establishes, for purposes of public utilities that provide electric power to consumers in this state, additional standards for purchase of energy or energy and capacity from qualifying facilities. Allows person injured by certain violations by public utility related to purchase and sale of energy or energy and capacity to recover treble damages from public utility.

2/4/19 H - Referred to Energy and Environment.
1/31/19 H - First reading. Referred to Speaker's desk.

HB 5017 **Position** **Priority**
Bill Info Monitor 2
Summary: Appropriates moneys from General Fund to Department of Environmental Quality for certain biennial expenses. Limits biennial expenditures from fees, moneys or other revenues, including Miscellaneous Receipts, specified bond proceeds and specified federal funds, but excluding lottery funds and other federal funds, collected or received by department. Limits biennial expenditures from lottery moneys allocated from Parks and Natural Resources Fund to department. Authorizes specified nonlimited expenditures. Limits certain biennial expenditures by department from federal funds. Declares emergency, effective July 1, 2019.
2/21/19 H - Public Hearing held.
2/20/19 H - Public Hearing held.
2/19/19 H - Public Hearing held.
2/18/19 H - Public Hearing held.
1/23/19 H - Assigned to Subcommittee On Natural Resources.
1/15/19 H - Referred to Ways and Means.
1/14/19 H - First reading. Referred to Speaker's desk.

SB 0038 **Position** **Priority**
Bill Info Support 2
Summary: Modifies provisions for treatment of renewable energy certificates issued for generation of thermal energy.
2/13/19 H - Referred to Energy and Environment.
2/6/19 H - First reading. Referred to Speaker's desk.
2/5/19 S - Third reading. Carried by Prozanski. Passed.
1/31/19 S - Recommendation: Do pass.
1/31/19 S - Second reading.
1/29/19 S - Work Session held.
1/22/19 S - Public Hearing held.
1/15/19 S - Referred to Environment and Natural Resources.
1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0068 **Position** **Priority**
Bill Info No Position 2
Summary: Increases annual fee imposed on public utilities and telecommunications providers for purpose of defraying costs of Public Utility Commission. Declares emergency, effective on passage.

2/4/19	S - Recommendation: Without recommendation as to passage and be referred to Ways and Means.
2/4/19	S - Referred to Ways and Means by order of the President.
1/31/19	S - Public Hearing and Work Session held.
1/15/19	S - Referred to Business and General Government.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0091 **Position** **Priority**

Bill Info Oppose 2

Summary: Requires at least 50 percent of public purpose charge funds paid to nongovernmental entity to be invested in providing incentives to retail electricity customers for accelerating transportation electrification. Specifies that accelerating transportation electrification qualifies as new market transformation effort for purposes of public purpose charge expenditure standard.

1/15/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0267 **Position** **Priority**

Bill Info Monitor 2

Summary: Transfers duties, functions and powers of State Department of Energy related to issuance of loans for small scale local energy projects to Oregon Business Development Department. Becomes operative on January 1, 2020. Requires loan contracts to make loans payable in full in event that Director of Oregon Business Development Department formally declares default of payment of loan or that project that is subject of loan fails to meet standards and criteria for projects. Becomes operative on January 1, 2020. Repeals certain provisions related to small scale local energy projects. Abolishes funds associated with provisions. Transfers moneys from abolished funds to Small Scale Local Energy Project Loan Fund. Appropriates moneys from General Fund to Oregon Business Development Department for purposes of Act. Repeals energy efficiency and sustainable technology loan program. Requires State Department of Energy to conduct audit of certain department activities. Declares emergency, effective on passage.

1/15/19	S - Referred to Environment and Natural Resources.
1/14/19	S - Introduction and first reading. Referred to President's desk.

SB 0451 **Position** **Priority**

Bill Info Monitor 2

Summary: Establishes eligibility for renewable energy certificates for facilities that generate electricity from direct combustion of municipal solid waste and became operational before January 1, 1995, if such facilities register with Western Renewable Energy Generation Information System at any time.

3/12/19 S - Public Hearing Scheduled.
1/28/19 S - Recommendation: Without recommendation as to passage and be returned to President's desk for referral. Referred to Environment and Natural Resources by order of the President.
1/25/19 S - Work Session held.
1/17/19 S - Referred to Carbon Reduction.
1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0503 **Position** **Priority**
Bill Info Support 2
Summary: Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.
1/16/19 S - Referred to Environment and Natural Resources.
1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0508 **Position** **Priority**
Bill Info Support 2
Summary: Specifies that electricity generated by hydroelectric facility or other equipment that generates electricity through use of hydroelectric energy may be used to comply with renewable portfolio standard.
3/7/19 S - Public Hearing Scheduled.
1/16/19 S - Referred to Environment and Natural Resources.
1/14/19 S - Introduction and first reading. Referred to President's desk.

SB 0712 **Position** **Priority**
Bill Info Monitor 2
Summary: Reduces, to 0.15 percent, percentage of energy resource supplier's gross operating revenue that annual energy resource supplier assessment may not exceed.
1/30/19 S - Referred to Environment and Natural Resources.
1/29/19 S - Introduction and first reading. Referred to President's desk.

SB 0713 **Position** **Priority**
Bill Info Monitor 2
Summary: Requires State Department of Energy to conduct study on department's contributions to leading State of Oregon to safe, clean and sustainable energy future.
1/30/19 S - Referred to Environment and Natural Resources.
1/29/19 S - Introduction and first reading. Referred to President's desk.

SB 0714	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Requires State Department of Energy to conduct study related to Energy Facility Siting Council and report findings to interim committees of Legislative Assembly by September 15, 2021.

1/30/19 S - Referred to Environment and Natural Resources.

1/29/19 S - Introduction and first reading. Referred to President's desk.

SB 0715	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Requires State Department of Energy to conduct study related to Energy Facility Siting Council and report findings to interim committees of Legislative Assembly by September 15, 2021.

1/30/19 S - Referred to Environment and Natural Resources.

1/29/19 S - Introduction and first reading. Referred to President's desk.

SB 5534	**Position**	**Priority**
Bill Info	Monitor	2

Summary: Limits certain biennial expenditures from fees, moneys or other revenues, including Miscellaneous Receipts, but excluding lottery funds and federal funds, collected or received by Public Utility Commission of Oregon. Limits biennial expenditures by commission from federal funds. Authorizes specified nonlimited expenditures. Declares emergency, effective July 1, 2019.

1/30/19 S - Public Hearing held.

1/23/19 S - Assigned to Subcommittee On Transportation and Economic Development.

1/15/19 S - Referred to Ways and Means.

1/14/19 S - Introduction and first reading. Referred to President's desk.

From:	Kelly Francone <kfrancone@energystrat.com>
Sent time:	11/05/2018 08:52:08 AM
To:	Tony Hardenbrook
Cc:	John Carr <jcarr@awec.solutions>
Subject:	RE: RSVP ICO Tony Hardenbrook, University of Oregon

Thanks Tony. I have you down as attending. We look forward to meeting you.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Tony Hardenbrook [mailto:aharden2@uoregon.edu]
Sent: Monday, November 05, 2018 8:37 AM
To: kfrancone@energystrat.com
Cc: John Carr
Subject: RSVP ICO Tony Hardenbrook, University of Oregon

Hello Kelly,

Thank you for sending the information for the AWEC conference on November 13th.

Please RSVP me for the AWEC conference. I intend on attending the meeting section for both Electric and Gas and the Guest Speaker presentation.

Thanks again, please let me know if you need any other information from me.

R/
Tony

Tony Hardenbrook
Director of Utilities and Energy
University of Oregon
aharden2@uoregon.edu
541-346-9007

Safety * Continuity * Efficiency

Tony,

Please see the full meeting information below. The meetings will run from 8 AM to 3:30 PM at the Hilton Seattle Airport Hotel and Conference Center in the Crystal A room, which is located in the conference center. Breakfast will be served between 8:00 and 9:00. Please let me know if you have any other questions.

Dear AWEC Members:

AWEC will be hosting its annual member meeting on Tuesday, November 13th, in Seattle at the Seattle Airport Hotel and Conference Center from 8:00 to 1:00 pm. A seated breakfast will be served beginning at 8:00 am, with the business portion of the meeting scheduled from **9:00 am to 11:30 for electric members only. At 11:30 we will hold our annual meeting section for both electric and gas members** with lunch following. Our guest speaker will follow the luncheon**. For the natural gas members only**, the natural gas portion of the meeting will begin at 1:30 PST.

Our guest speaker will be Elliot Mainzer, BPA Administrator.

The annual meeting is important as we elect new officers and hope many of you can participate. Call-in information will be available when the agenda is issued. The complete documents will be sent out the day before the meeting.

We do not have a reduced hotel room rate, but right now a room can be reserved for $112 with three days cancellation using the "flexible rate".

Hilton at Seatac: http://www3.hilton.com/en/hotels/washington/hilton-seattle-airport-and-conference-center-SEAAHHH/index.html

Please RSVP at kfrancone@energystrat.com **only if you haven't already done so.**

Please let us know if you have any questions.

Kelly Francone
Consultant
Energy Strategies
215 S. State Street, Ste 200, SLC, UT 84111
801-355-4365
kfrancone@energystrat.com

From: Kelly Francone <kfrancone@energystrat.com>
Sent time: 11/15/2018 10:35:48 AM
To: Tony Hardenbrook
Cc: John Carr <jcarr@awec.solutions>; Kim Ignjatovic <kignjatovic@energystrat.com>
Subject: AWEC Membership

Tony,

Welcome to AWEC. We are excited to have the University of Oregon as a member. Please let me know, besides yourself, who you would like to receive our energy briefs, newsletters, member and meeting information, etc, and send their email addresses to me.

Also, what is the process for invoicing the University when we begin in January? Is there a process we need to go through to set up an account or Purchase Order, or a party we directly invoice? Thank you for your help.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 11/14/2018 11:37:53 AM

To: Aldis.Raisters@gapac.com; Hugh.O.Pierce@tsocorp.com; kwilson@legadv.com; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; mruckwardt@schn.com; Noel.Mak@ATImetals.com; Samuel.Liebelt@kapstonepaper.com; todd.wiseman@solvay.com; tom@richlandpaper.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; mary.mccordic@shell.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; SteveHarper@thisisnoble.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Bill Smith <Bill.Smith@airliquide.com>; Boz <vanhoutb@ohsu.edu>; Brad Beavers <bbeavers@timberproducts.com>; Brad Troup <Brad.L.Troup@tsocorp.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@NipponDynawave.com>; Briane Keene <BrianR.Keene@airliquide.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <WittmannConsultingLLC@outlook.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Chad Sorber <sorber@ohsu.edu>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leon <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Dan Riley <daniel.t.riley@tsocorp.com>; Dave Post <Dave.Post@wahchang.com>; David Barge <David.A.Barge@tsocorp.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Mitcheltree <DBM@EESconsulting.com>; David Tobin <DavidTobin@BoisePaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <Don.Sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@precastcorp.com>; Eric Streicher <Eric.Streicher@Airgas.com>; Ernesto M Negrete <Ernesto.M.NegretePapadakis@tsocorp.com>; Fawn Barrie <fbarrie@legadv.com>; Gary Collison <GCollison@pccstructurals.com>; Graham Bailey <graham.bailey@NipponDynawave.com>; Greg Miller <greg.miller@weyerhaeuser.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; JaDPrice <JaDPrice@gapac.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell.com>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.org>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Marty Sedler <marty.sedler@intel.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Broughton <michael.l.broughton@boeing.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@RockTenn.com>; Michael Kuhn <mkuhn@RockTenn.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.Slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@DeltaEnergyllc.com>; Nick Kaiser <Nick.Kaiser@NipponDynawave.com>; Public Affairs Counsel <pac@pacounsel.org>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <PLydon@LHS.org>; Pat Ortiz <Patrick.Ortiz@kapstonepaper.com>; Patrick Loupin <PatrickLoupin@PackagingCorp.com>; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@Ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Sandi Swarthout <sswarthout@capconn.net>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <Scott.R.Hawley@tsocorp.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steve Wood <S.Wood@resolutefp.com>; Steven Castracane <steven.castracane@linde.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tony Hardenbrook; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; William McMahon <william.mcmahon@ipaper.com>; Bill Gilmore <billmg@penwool.com>; Chad Stokes <cstokes@cablehuston.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Ed Coghlan <Ed.coghlan@onsemi.com>; Ed Finklea <efinklea@awec.solutions>; Jake Evans <Jake.evans@onsemi.com>; Jared Sommer <sommerj@byui.edu>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kyle Williams <williamsk@byui edu>; Nancy Holbrook <Nancy.Holbrook@bp.com>; Nick Avenetti <nick@perlite.com>; Rick Stricker <rstricker@baf.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Steve O'Brien <sobrien@baf.com>; Tommy Brooks <tbrooks@cablehuston.com>; Tony Hardenbrook; Tyler C. Pepple <tcp@dvclaw.com>; Chuck Gates [redacted]; Nancy Richardson <Nancy.Holbrook@bp.com>; Robert Pierce <robert.pierce@shell.com>; Rusty Williams <williwk@bp.com>

Cc: John Carr <jcarr@awec.solutions>; Ed Finklea <efinklea@awec.solutions>

Subject: AWEC Natural Gas Presentation

Attachments: AWEC Natural Gas Presentation - Nov 13 2018.pdf

AWEC members,

This presentation addresses the Sumas gas rupture that occurred in October. Please let us know if you have questions.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

NYSE: WMB | williams.com

Williams. WE MAKE ENERGY HAPPEN

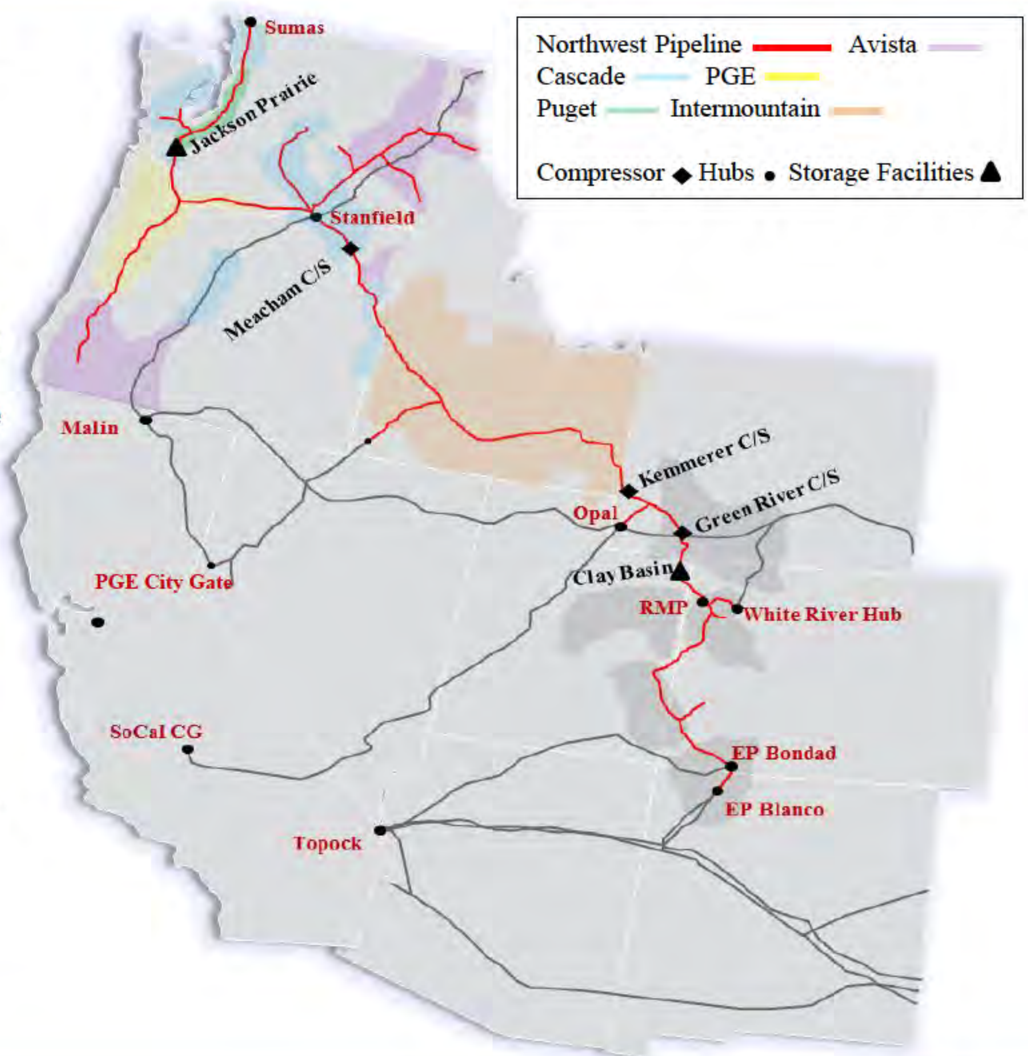
AWEC Member Update

Northwest Pipeline – November 13, 2018

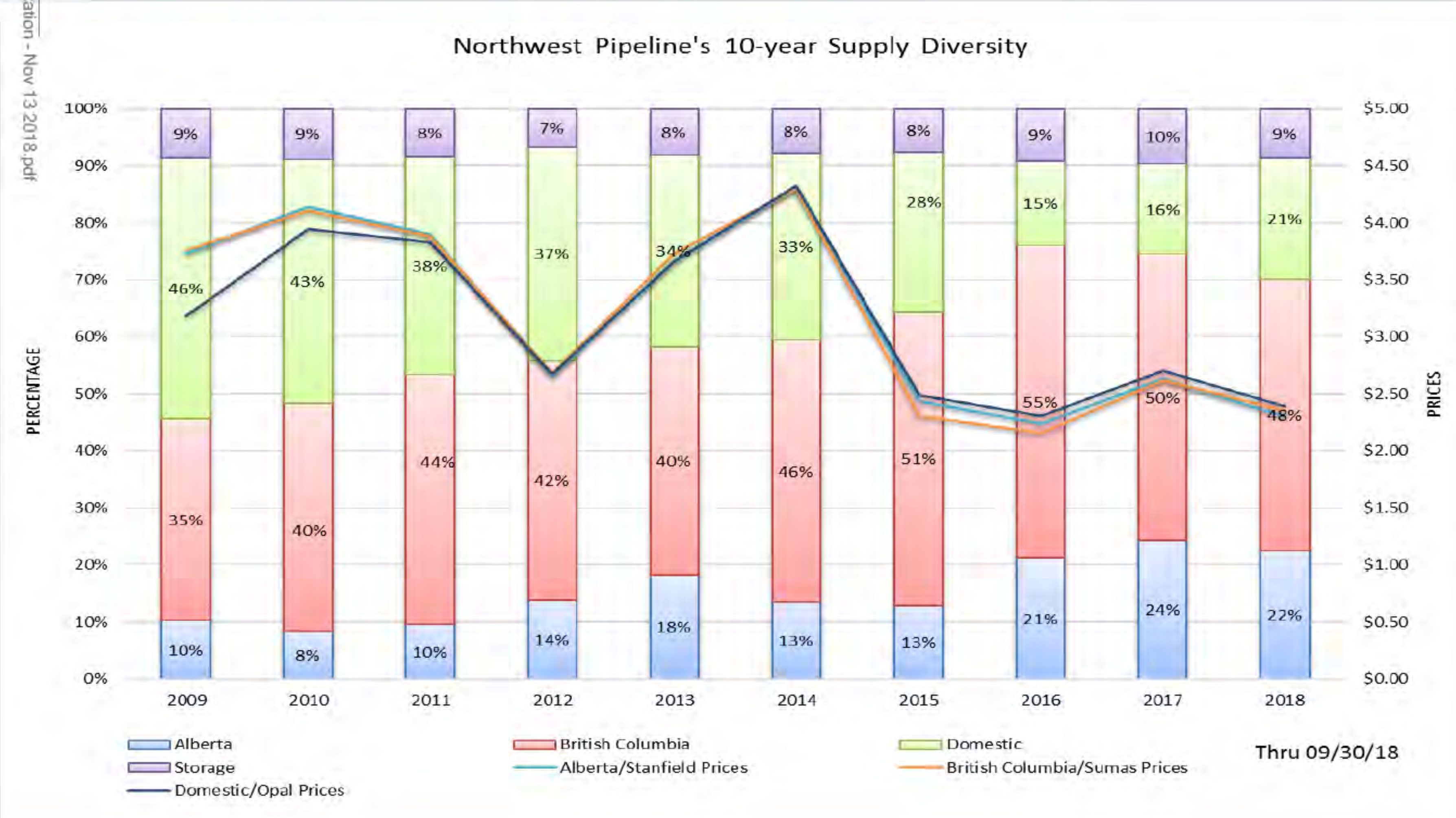
SUMAS COMPRESSOR STATION
Northwest Pipeline, Washington

Northwest System – Overview

- **Northwest Pipeline is a Federally regulated interstate natural gas pipeline**
- **Primary service provider in the Pacific Northwest**
  - 3,900-mile system with 3.8 Bcf/d peak design capacity
  - ~120 Bcf of access to storage along pipeline, with high injection and deliverability capability in market area
  - Fully Contracted with > 9 year average contract life
- **Bi-directional design**
  - Provides flexibility (Rockies to market and Sumas to market)
  - Cheapest supply drives flow patterns
  - Provides operational efficiencies through displacement
- **Numerous supply sources**
  - 65 receipt points totaling 11.6 Bcf/d of supply from Rockies, Sumas, WCSB, San Juan, emerging shales
- **Significant market options**
  - 366 delivery points totaling 9.7 Bcf/d of delivery capacity



Northwest Pipeline Supply Diversity



Williams

Northwest Pipeline I-5 Corridor

> **Local Utilities, Power Generation Plants, and Industrial Facilities rely on Northwest Pipeline as the primary source of gas in significant portions of Western Washington and Oregon**

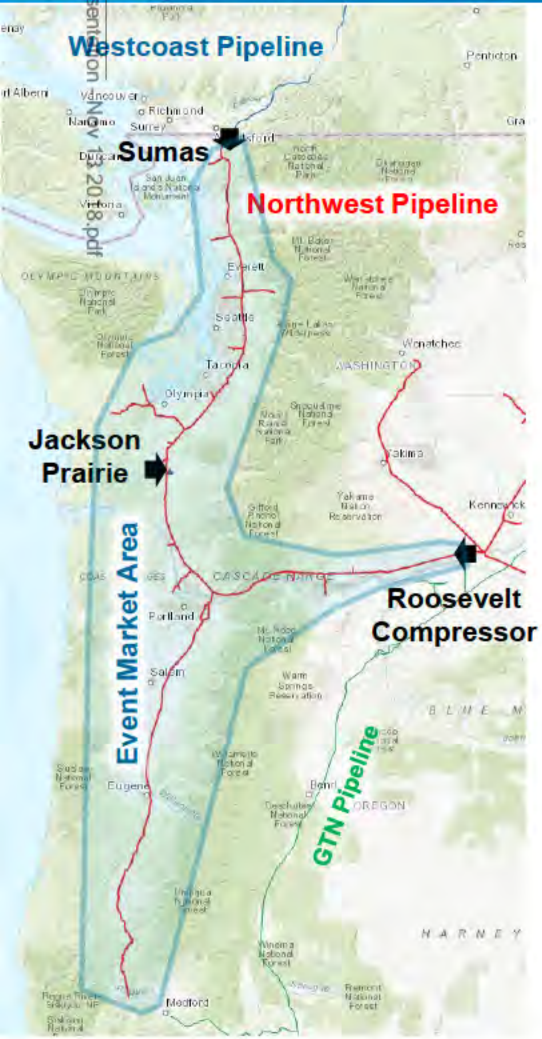
> **Northwest is bi-directional and enables customers to transport gas from Canadian or Domestic supply sources, with gas entering the market area at Sumas Receipt or through Roosevelt Compressor:**

– Sumas Receipt can receive up to 1.3 Bcf/d of Canadian production from Westcoast Pipeline at the Canadian border

– Roosevelt Compressor can flow up to 0.55 Bcf/d from multiple domestic interconnects and producers

> **Jackson Prairie Storage (25.6 Bcf capacity) can deliver up to 1.3 Bcf/d into the market area and is used for system balancing by Northwest Pipeline**

October 9, 2018 – Northwest System Status



> **On October 9th, Northwest customers were delivering at an average rate of approximately 1.28 Bcf of Gas into the Market Area, and had scheduled an additional 1.21 Bcf for Oct 10**

Expected Supply to Market Area	October 9 (Intraday)	October 10 (Evening)
Sumas Receipt	878,553	959,460
Roosevelt Compressor	397,763	246,052
Total	**1,276,316**	**1,205,512**

> **Planned maintenance was occurring on Northwest Pipeline prior to the winter season**

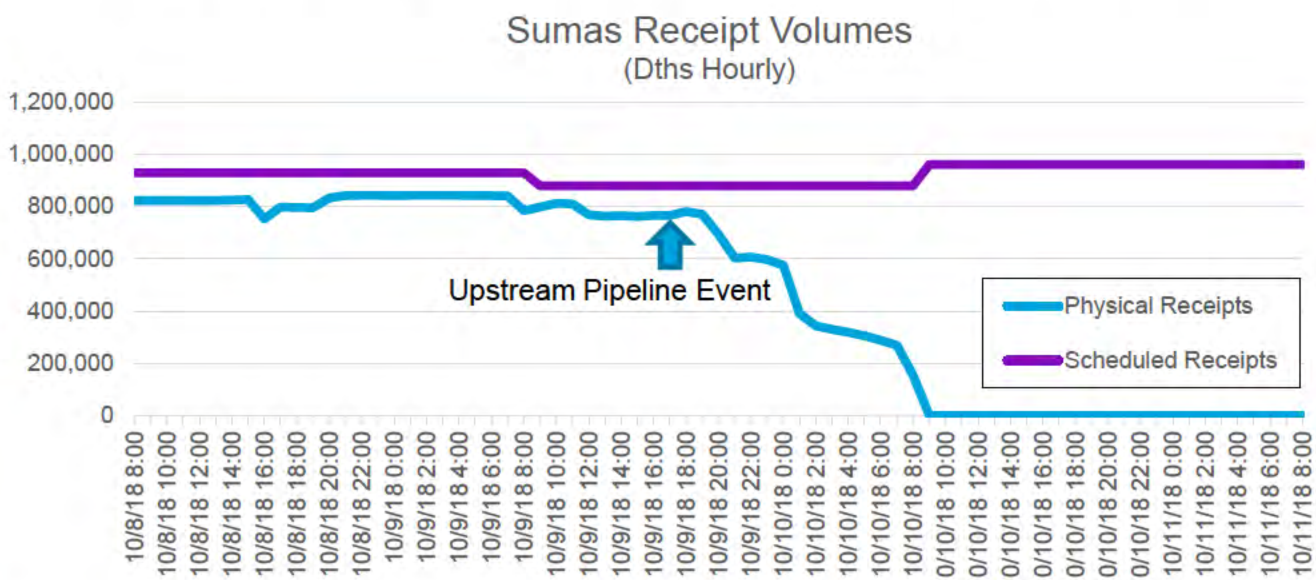
- Jackson Prairie was reduced from 1.3 Bcf to 0 as part of maintenance scheduled to last Oct 1-12
- Roosevelt Compressor was undergoing upgrades and reduced from 550,000 to only 400,000 as part of maintenance scheduled until October 15.
- Plymouth LNG, storage facility (west of Roosevelt) was liquifying and Clay Basin was requiring injections for downhole testing

Supply Source	Peak Capacity	Available Capacity
Sumas	1,314,750	1,314,750
Jackson Prairie	1,300,000	0
Roosevelt Compressor	546,000	400,000
Total	**3,160,750**	**1,714,750**

Williams

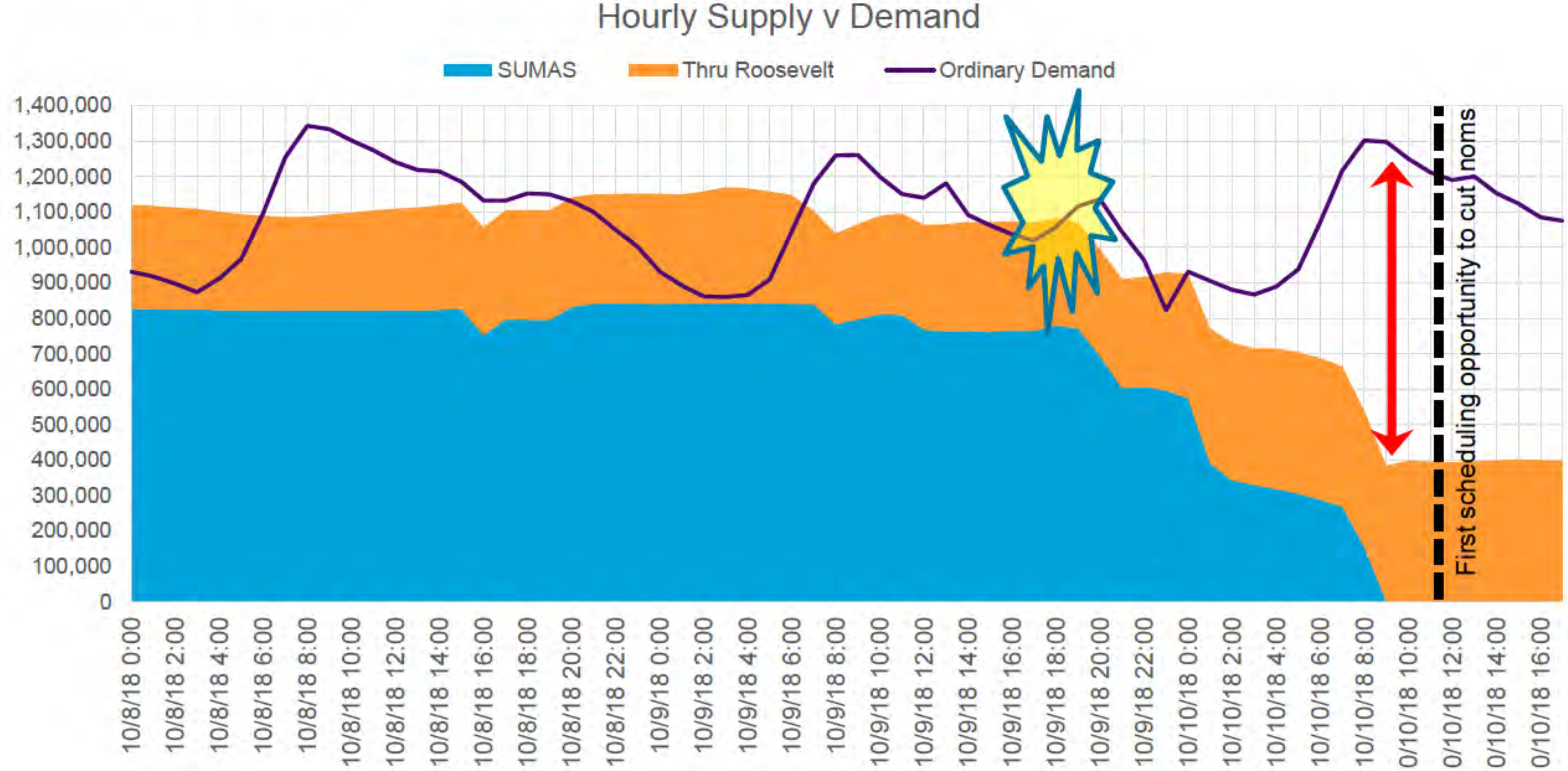
Westcoast Incident – October 9th ~6:45 pm mtn

- On the evening of October 9, 2018, Westcoast Energy Inc.'s (Westcoast) BC Pipeline experienced a rupture on a 36-inch diameter upstream pipeline, causing a significant interruption to gas supply at Northwest's Sumas, Washington receipt point
- Deliveries at Sumas immediately began to fall and its was recognized the market would be in extreme danger of losing service to critical residential and other core loads
- By 9AM on October 10th, Northwest was receiving ZERO of 959,460 dekatherms customers were expecting to receive from Sumas



Critical Operating Condition Ensues

Market area needs to shed Demand

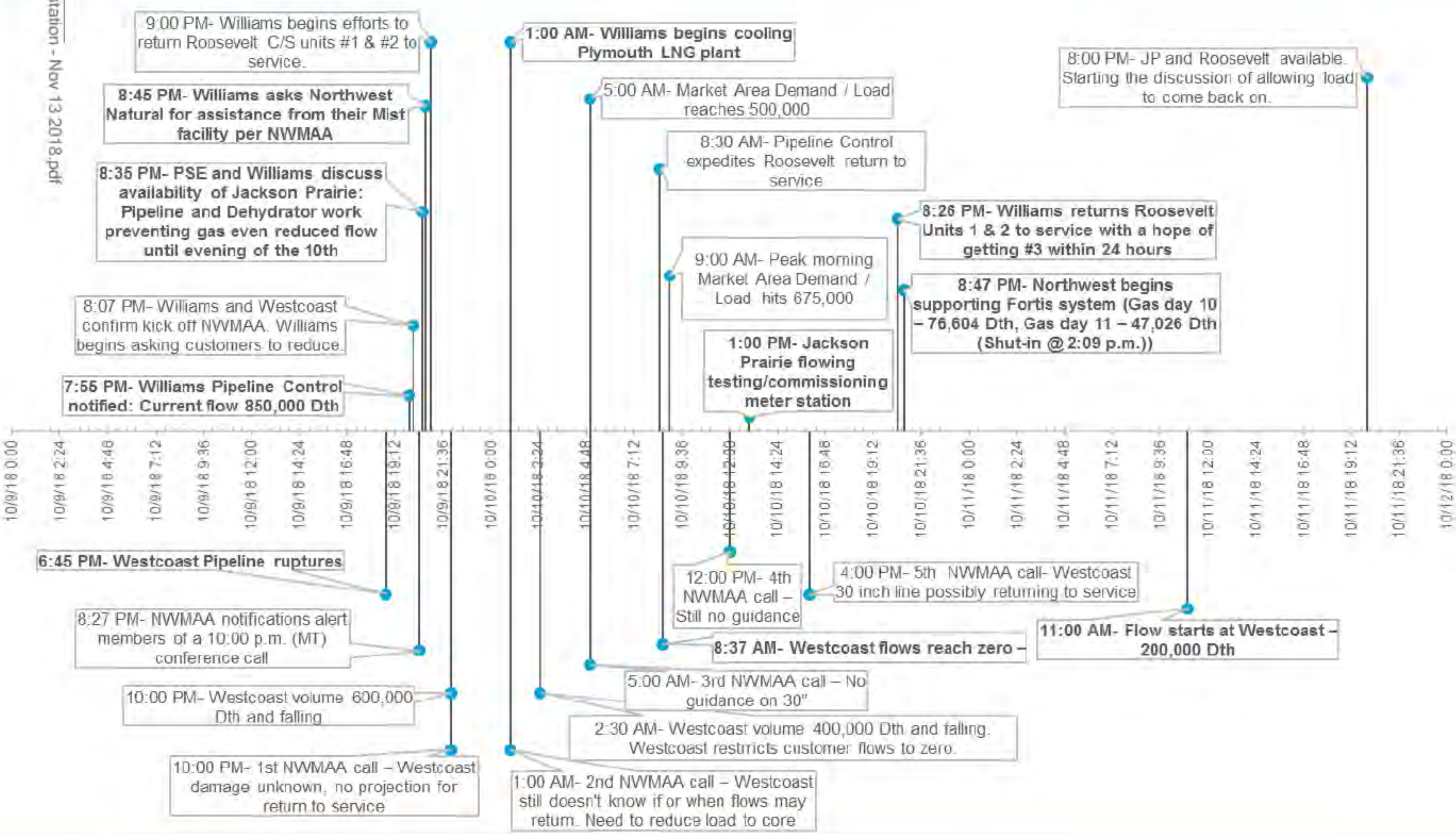


Williams

Key Market Responses to Incident

- > **Activate the Northwest Mutual Assistance Agreement**
- > **Consists of LDCs, pipelines and industry groups in the Pacific Northwest who operate, control natural gas assets or have an ability to assist in the case of an emergency**
  - First call by 10:00 pm (approximately three hours after the incident)
  - Call included Westcoast, Fortis, Northwest, LDC's and power participants
  - Steps were put in-place to shed natural gas demand
    - Major power, industrial and LDC load started to come off the system immediately
- > **Northwest issued overrun entitlement for gas day October 10th at 5%, thereafter 3%**
- > **Northwest accelerated work to restore full operational service at Roosevelt compressor station**
- > **Puget Sound Energy and Northwest expedited Jackson Prairie's return to service**
- > **Northwest took steps to make Plymouth LNG supply available if required**
- > **NWN provided significant relief by serving its demand from Mist**

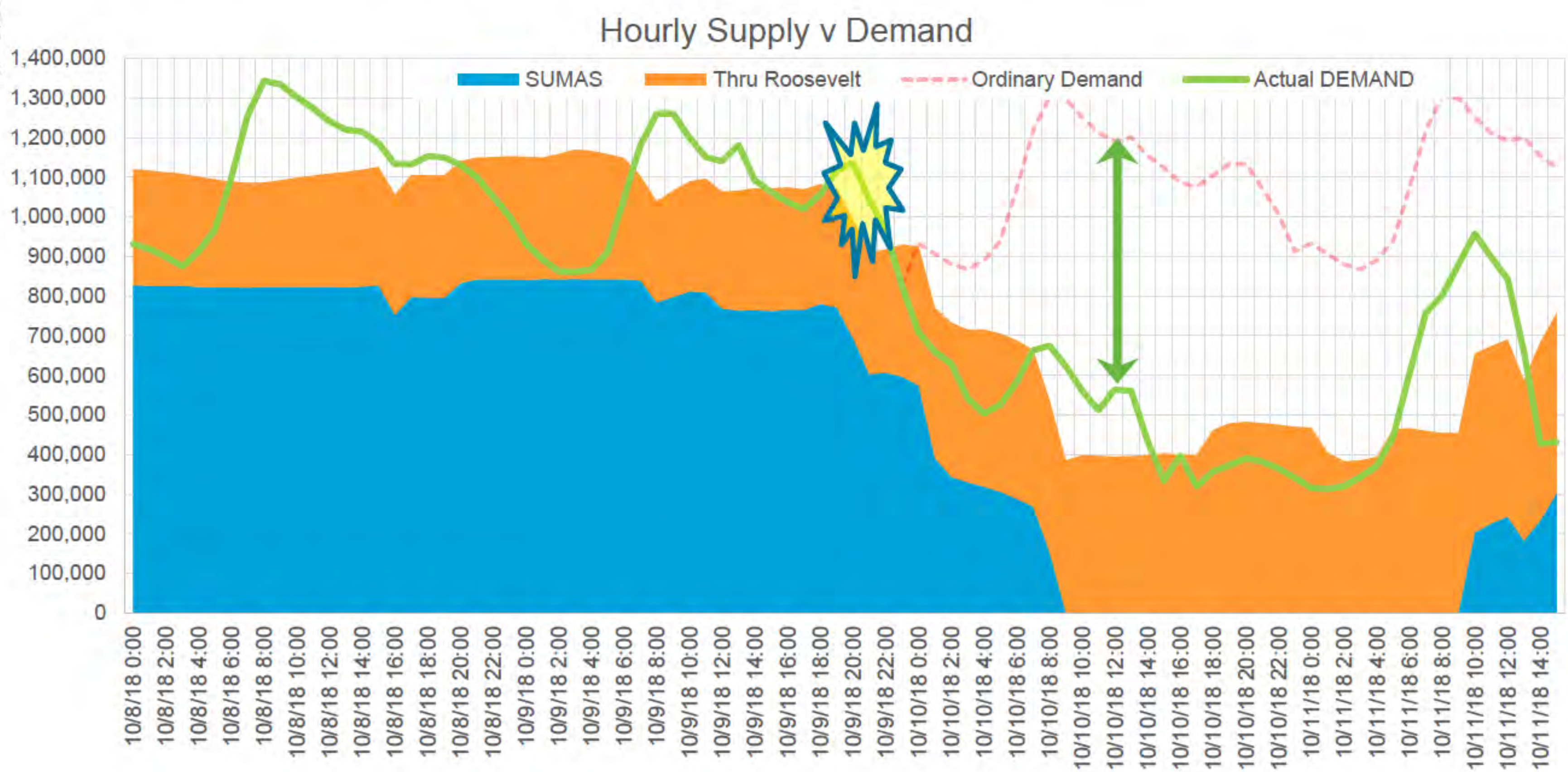
Initial Timeline of Events



Williams

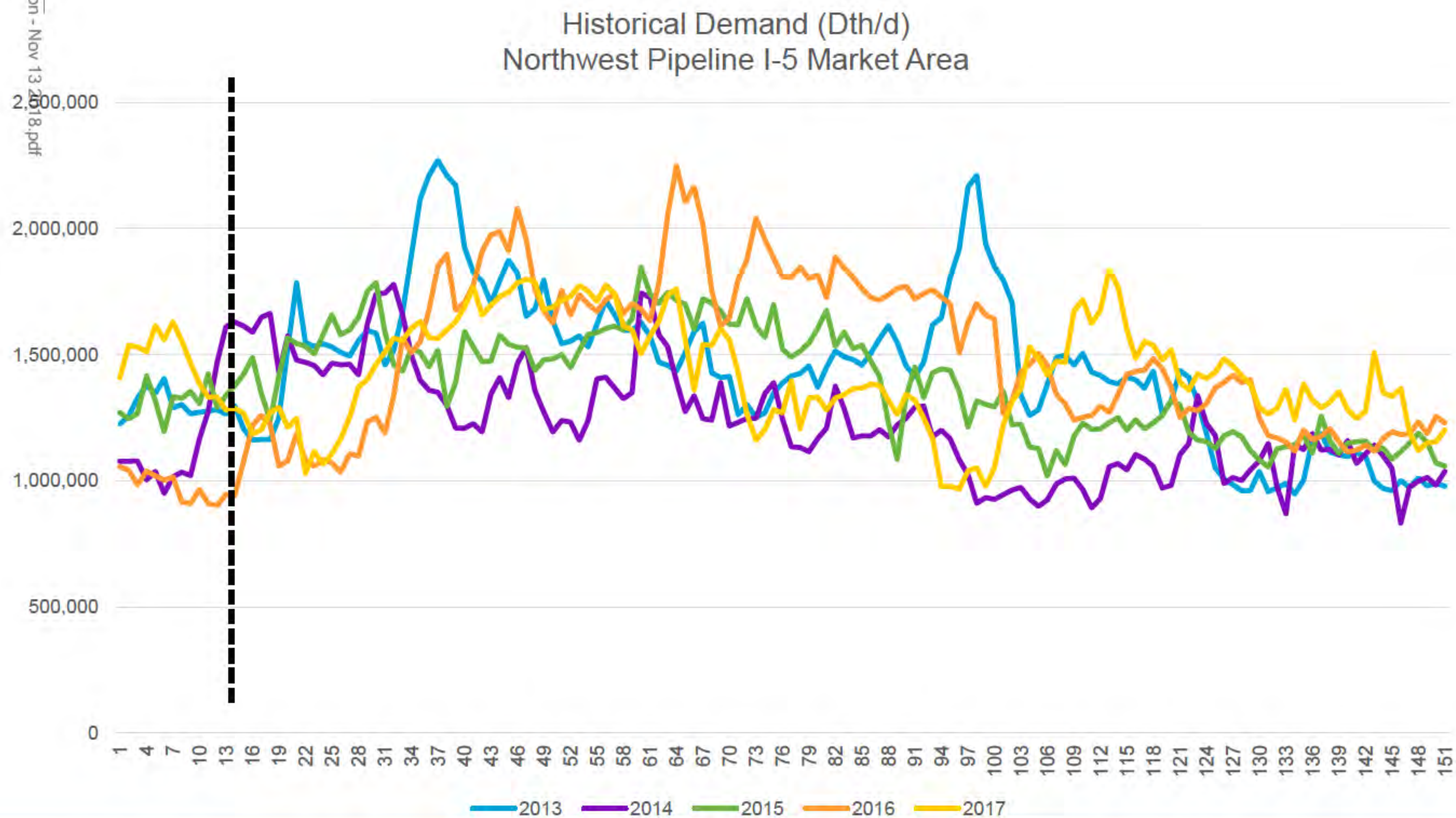
NWMAA Success Story

Customers shed demand and balance NWP

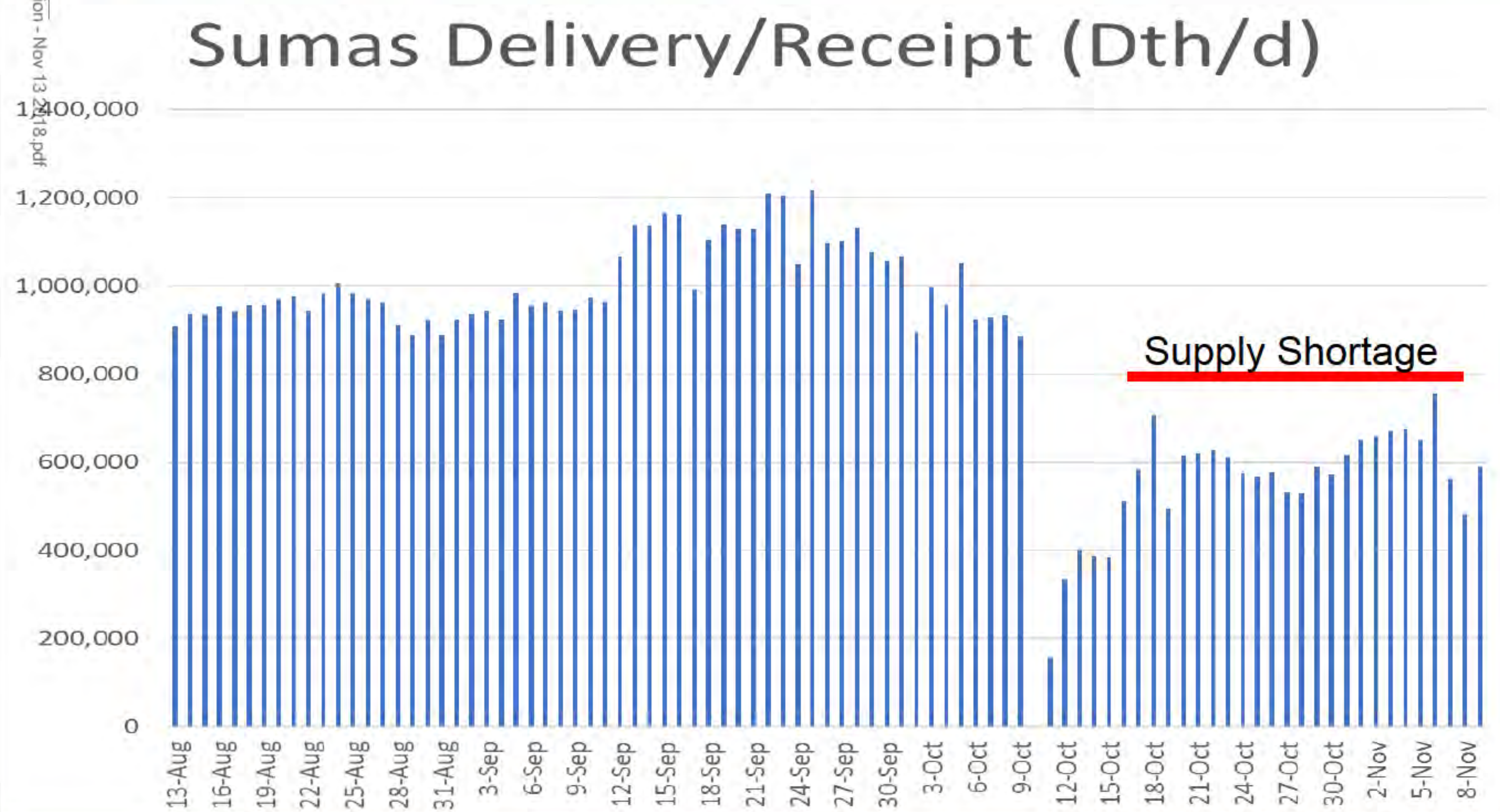


Williams

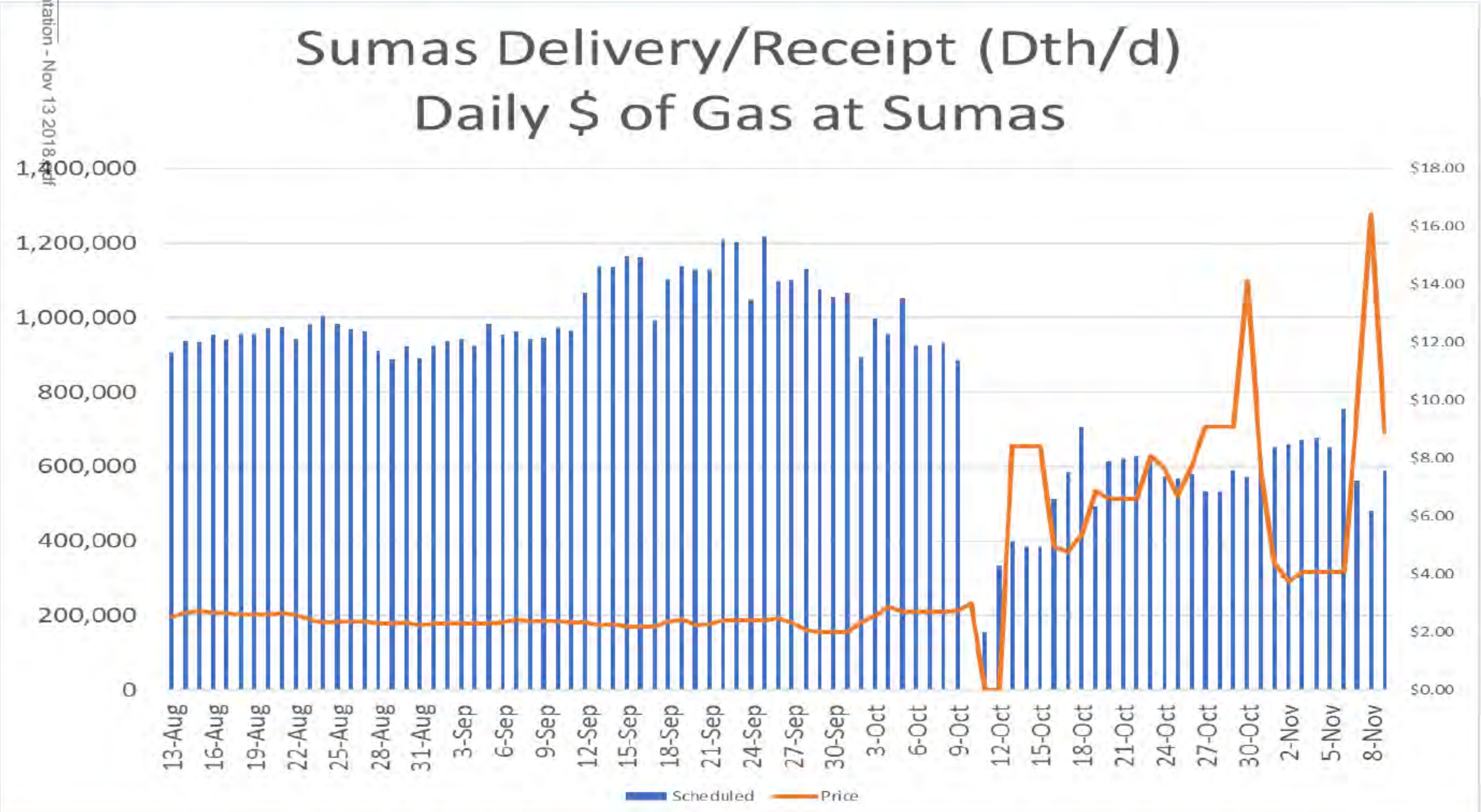
Historical Demand (Scheduled)



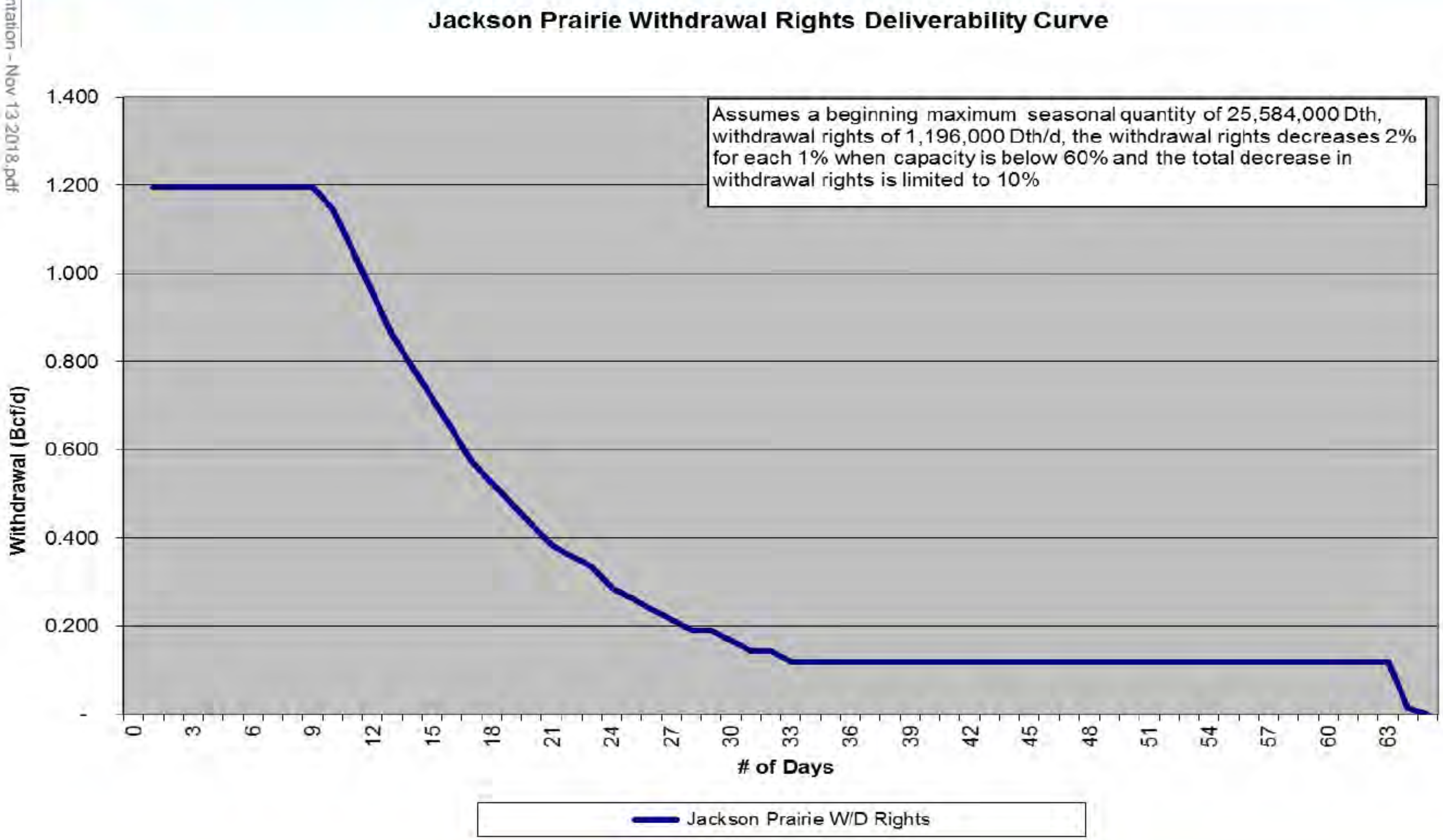
Sumas Receipts (Scheduled)



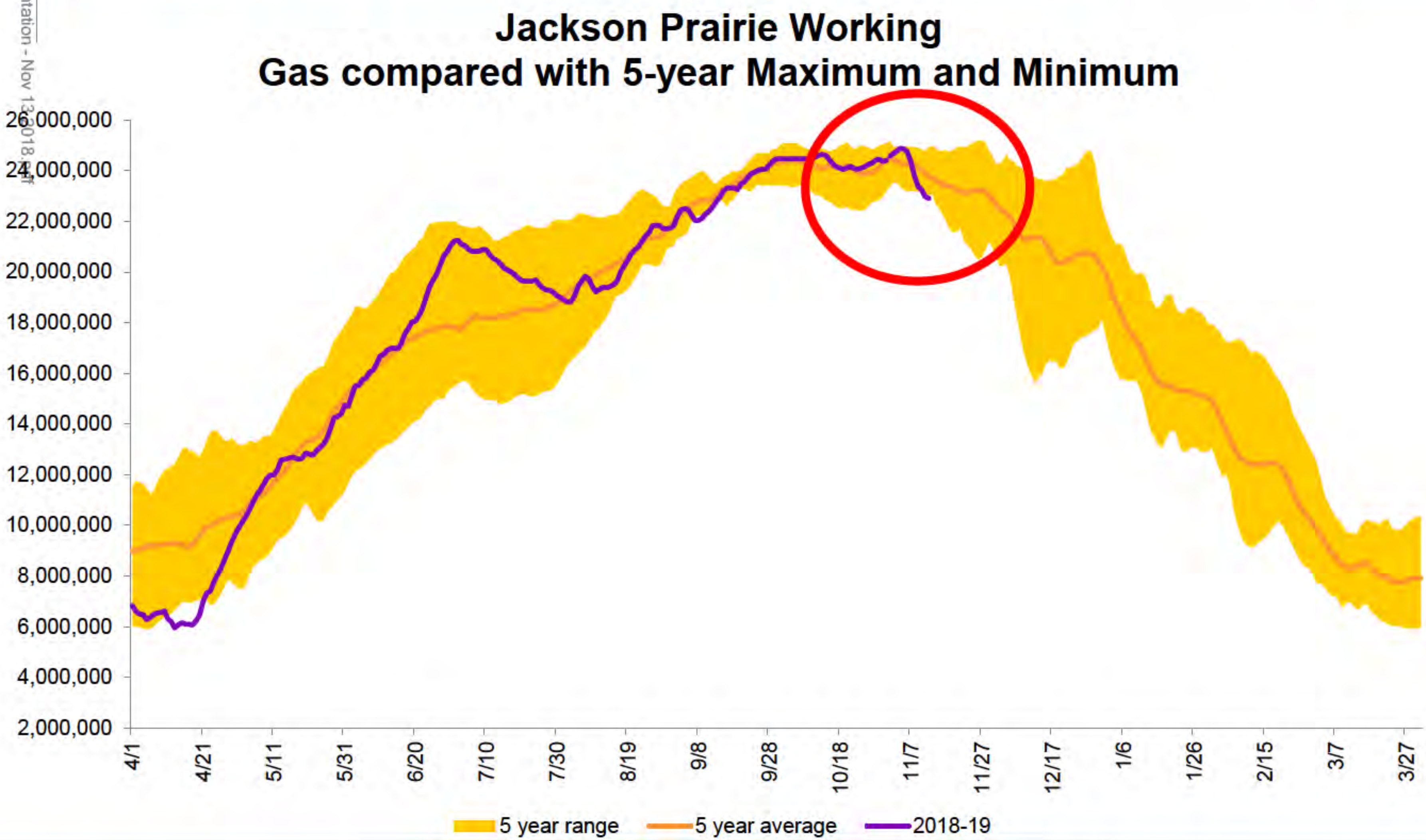
Sumas Receipts (Scheduled) w/ Daily Price



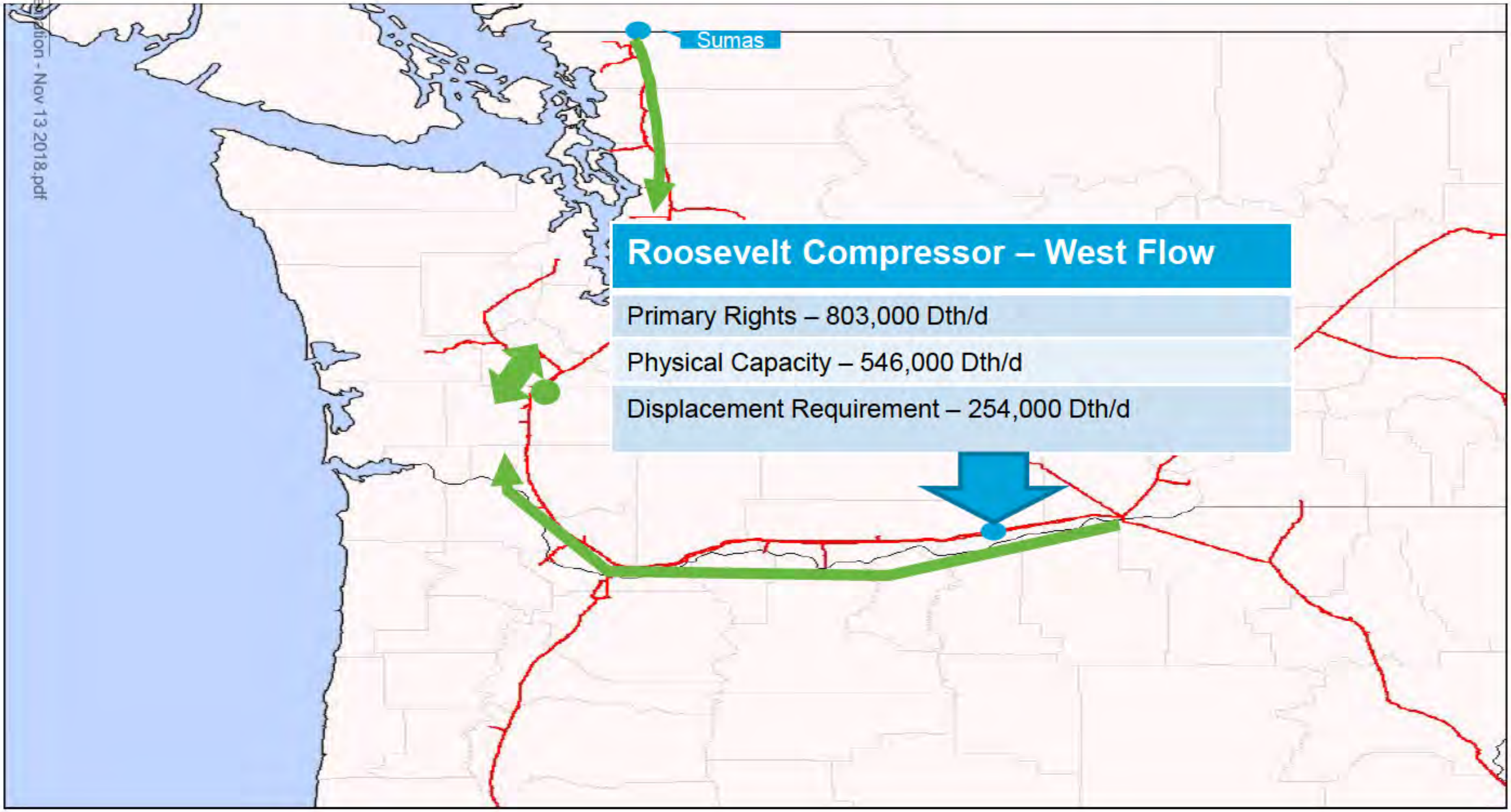
Jackson Prairie Available Supply



Jackson Prairie Historical Usage



Roosevelt Compressor Displacement Requirement



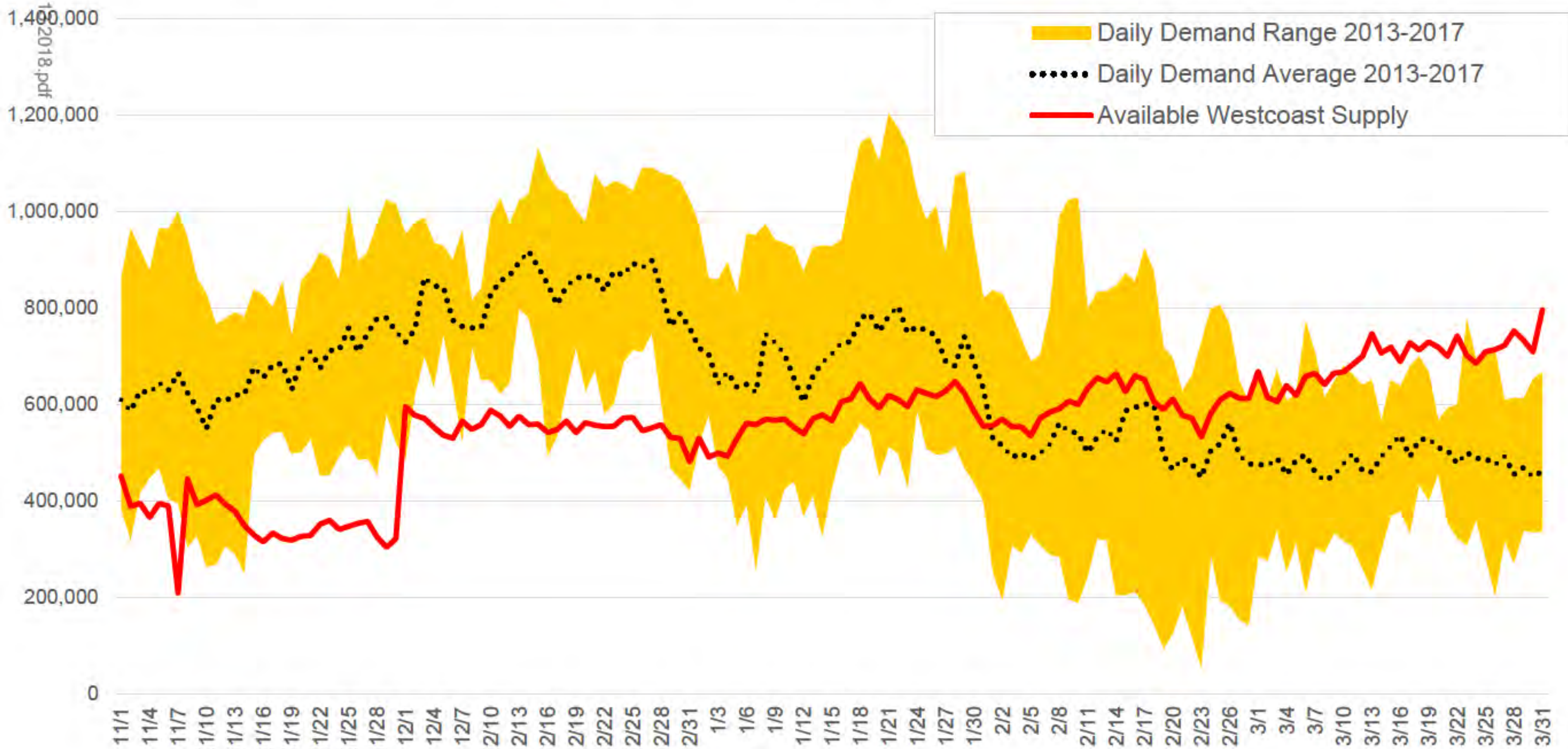
Roosevelt Compressor – West Flow

Primary Rights – 803,000 Dth/d
Physical Capacity – 546,000 Dth/d
Displacement Requirement – 254,000 Dth/d

Williams

Northwest Poised for Tight Winter

Historical I-5 Market Area Demand in Excess of Roosevelt Capacity



Parting Words – We are all in this together

> Northwest must maintain integrity of its system

> Expected less supply available heading into winter due to upstream incident

> Entitlements will be used to manage pipeline system linepack
  - Customers asked to avoid drafting

> Operational Flow Orders required to manage displacement requirements

> Jackson Prairie storage facility inventory will be judiciously managed to preserve delivery curve

> Questions? Please feel free to reach out – Gary Venz 801-584-6621

THANK YOU FOR YOUR TIME

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 11/19/2018 12:55:15 PM

To: Aldis.Raisters@gapac.com; Hugh.O.Pierce@tsocorp.com; kwilson@legadv.com; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; mruckwardt@schn.com; Noel.Mak@ATImetals.com; Samuel.Liebelt@kapstonepaper.com; todd.wiseman@solvay.com; tom@richlandpaper.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy com; jpino@uetllc.com; mary.mccordic@shell.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; SteveHarper@thisisnoble.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Alex Koleber; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Bill Smith <Bill.Smith@airliquide.com>; Boz <vanhoutb@ohsu.edu>; Brad Beavers <bbeavers@timberproducts.com>; Brad Troup <Brad.L.Troup@tsocorp.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@NipponDynawave.com>; Briane Keene <BrianR.Keene@airliquide.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <WittmannConsultingLLC@outlook.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Chad Sorber <sorber@ohsu.edu>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leon <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Dan Riley <daniel.t.riley@tsocorp.com>; Dave Post <Dave.Post@wahchang.com>; David Barge <David.A.Barge@tsocorp.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Mitcheltree <DBM@EESconsulting.com>; David Tobin <DavidTobin@BoisePaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <Don.Sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@precastcorp.com>; Eric Streicher <Eric.Streicher@Airgas.com>; Ernesto M Negrete <Ernesto.M.NegretePapadakis@tsocorp.com>; Fawn Barrie <fbarrie@legadv.com>; Gary Collison <GCollison@pccstructurals.com>; Graham Bailey <graham.bailey@NipponDynawave.com>; Greg Miller <greg.miller@weyerhaeuser.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; JaDPrice <JaDPrice@gapac.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell.com>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.org>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Marty Sedler <marty.sedler@intel.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Broughton <michael.l.broughton@boeing.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@RockTenn.com>; Michael Kuhn <mkuhn@RockTenn.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.Slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@DeltaEnergyllc.com>; Nick Kaiser <Nick.Kaiser@NipponDynawave.com>; Public Affairs Counsel <pac@pacounsel.org>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <PLydon@LHS.org>; Pat Ortiz <Patrick.Ortiz@kapstonepaper.com>; Patrick Loupin <PatrickLoupin@PackagingCorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@Ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Sandi Swarthout <sswarthout@capconn.net>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <Scott.R.Hawley@tsocorp.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steve Wood <S.Wood@resolutefp.com>; Steven Castracane <steven.castracane@linde.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tony Hardenbrook; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; William McMahon <william.mcmahon@ipaper.com>; Bill Gilmore <billmg@penwool.com>; Chad Stokes <cstokes@cablehuston.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Ed Coghlan <Ed.coghlan@onsemi.com>; Ed Finklea <efinklea@awec.solutions>; Jake Evans <Jake.evans@onsemi.com>; Jared Sommer <sommerj@byui.edu>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kyle Williams <williamsk@byui.edu>; Nancy Holbrook <Nancy.Holbrook@bp.com>; Nick Avenetti <nick@perlite.com>; Phil Foss <phil.foss@onsemi.com>; Rick Stricker <rstricker@baf.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Steve O'Brien <sobrien@baf.com>; Tommy Brooks <tbrooks@cablehuston.com>; Tony Hardenbrook; Chuck Gates [redacted]; Nancy Holbrook <Nancy.Holbrook@bp.com>; Robert Pierce <robert.pierce@shell.com>; Rusty Williams <williwk@bp.com>

Subject: AWEC 2019 Meetings

AWEC members,

Following this email I will be sending to you the 2019 meetings as calendar invites so that you can accept them on your calendar so that you at least know they are coming even if you don't end up attending. Please NOTE: even if you accept the invite I don't count those as RSVPs for attending. Please continue to RSVP to me when I begin sending meeting notice reminders out via email. I will not consider you accepting an invitation as an RSVP for a meeting as they are too far out.

March Meeting: Portland Sheraton Airport Hotel

March 6, 8 am to 3:30 PM PST

June Meetings: Skamania Lodge in Stevenson, WA

June 5: AWEC gas meeting 8:30 to 11:30
June 5: Evening kickoff of the joint AWEC conference with NWGA
June 6: 7:30 to 4:40 PM PST joint conference with NWGA
June 7: AWEC electric meeting 8:00 am to 1:30 PM PST

September NO Meeting:

Written handouts will be provides in place of holding a meeting

November Annual Member Meeting in Seattle:

November 13: AWEC annual member meeting 8:00 am to 3:30 PM PST

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 11/19/2018 01:27:05 PM

To: Aldis.Raisters@gapac.com; Alicia Givens (agivens@pacounsel.org) <agivens@pacounsel.org>; Ben Byman (Ben.Byman@lvpnp.com) <Ben.Byman@lvpnp.com>; Bill Castleberry (Bill.Castleberry@emeraldmaterials.com) <Bill.Castleberry@emeraldmaterials.com>; Bill Smith (Bill.Smith@airliquide.com) <Bill.Smith@airliquide.com>; Boz (vanhoutb@ohsu.edu) <vanhoutb@ohsu.edu>; Brad Beavers (bbeavers@timberproducts.com) <bbeavers@timberproducts.com>; Bruce Wittmann (WittmannConsultingLLC@outlook.com) <WittmannConsultingLLC@outlook.com>; Chad Sorber (sorber@ohsu.edu) <sorber@ohsu.edu>; Charley Hathaway (charley.hathaway@nwpsllc.com) <charley.hathaway@nwpsllc.com>; Chris Horn (chris_h@columbiasteel.com) <chris_h@columbiasteel.com>; Craig Anneberg (Craig.anneberg@norpacpaper.com) <Craig.anneberg@norpacpaper.com>; David Clemens (David.Clemens@darigold.com) <David.Clemens@darigold.com>; David Mitcheltree (DBM@EESconsulting.com) <DBM@EESconsulting.com>; David Tobin (DavidTobin@BoisePaper.com) <DavidTobin@BoisePaper.com>; Dennis (Dennis.Draleau@recsilicon.com) <Dennis.Draleau@recsilicon.com>; Drew Bryck (drew.m.bryck@boeing.com) <drew.m.bryck@boeing.com>; Eric Streicher (Eric.Streicher@Airgas.com) <Eric.Streicher@Airgas.com>; Fawn Barrie (fbarrie@legadv.com) <fbarrie@legadv.com>; Graham Bailey (graham.bailey@nippondynawave.com) <graham.bailey@nippondynawave.com>; Hugh.O.Pierce@tsocorp.com; Janese Pearson (Janese.Pierson@ipaper.com) <Janese.Pierson@ipaper.com>; Jeff Johnson (Jeff.Johnson@recsilicon.com) <Jeff.Johnson@recsilicon.com>; Jenifer Suffridge (jenifer.suffridge@shell.com) <jenifer.suffridge@shell.com>; Jennifer (jenny@pacounsel.org) <jenny@pacounsel.org>; Jennifer Hackett (Jena.Hackett@ipaper.com) <Jena.Hackett@ipaper.com>; John Bob (John.Bob@am.dynonobel.com) <John.Bob@am.dynonobel.com>; John Latimer (john.latimer@shell.com) <john.latimer@shell.com>; Josh Weber (jdw@dvclaw.com) <jdw@dvclaw.com>; Karen Vaughn (Karen.Vaughn@gapac.com) <Karen.Vaughn@gapac.com>; Keith Warner (keith.c.warner@boeing.com) <keith.c.warner@boeing.com>; kwilson@legadv.com; Ken Dey (ken.dey@simplot.com) <ken.dey@simplot.com>; Ken Johnson (ken.johnson@recsilicon.com) <ken.johnson@recsilicon.com>; Khaly Niang (Khaly.Niang@airliquide.com) <Khaly.Niang@airliquide.com>; Larry Voos (larry.voos@norpacpaper.com) <larry.voos@norpacpaper.com>; Laura Jane Schaefer (schaefel@ohsu.edu) <schaefel@ohsu.edu>; Marcie Peters (marcie.peters@solvay.com) <marcie.peters@solvay.com>; Mark Roeter (Mark_R@columbiasteel.com) <Mark_R@columbiasteel.com>; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; Matt Upmeyer (matt.upmeyer@lambweston.com) <matt.upmeyer@lambweston.com>; Nick Kaiser (Nick.Kaiser@NipponDynawave.com) <Nick.Kaiser@NipponDynawave.com>; Noel.Mak@ATImetals.com; Randy Clancy (clancyrb@airproducts.com) <clancyrb@airproducts.com>; Rob Buckingham (rob.buckingham@norpacpaper.com) <rob.buckingham@norpacpaper.com>; Samuel.Liebelt@kapstonepaper.com; Sarah Schack (sschack@timberproducts.com) <sschack@timberproducts.com>; Skylar (Skyler.Mlasko@northwesthardwoods.com) <Skyler.Mlasko@northwesthardwoods.com>; Stan Jackson (S.Jackson@shell.com) <S.Jackson@shell.com>; todd.wiseman@solvay.com; tom@richlandpaper.com; Trudy Slagle (trudy.slagle@lambweston.com) <trudy.slagle@lambweston.com>; Tyne Brownlow (tyne.brownlow@ipaper.com) <tyne.brownlow@ipaper.com>; Bill Gilmore (billmg@penwool.com) <billmg@penwool.com>; Clay Riding (clayr@nw-iw.com) <clayr@nw-iw.com>; Daryll Fuentes (dfuentes@usg.com) <dfuentes@usg.com>; David Hawk ([redacted] <[redacted]; David Jones (david.jones@swansongroup.biz) <david.jones@swansongroup.biz>; Ed Coghlan (Ed.coghlan@onsemi.com) <Ed.coghlan@onsemi.com>; Jake Evans (Jake.evans@onsemi.com) <Jake.evans@onsemi.com>; Jared Sommer (sommerj@byui.edu) <sommerj@byui.edu>; Jim Duke (jduke@idahoan.com) <jduke@idahoan.com>; Joe Burrell (Joseph.g.burrell@jci.com) <Joseph.g.burrell@jci.com>; Kyle Williams (williamsk@byui.edu) <williamsk@byui.edu>; Nancy Holbrook (Nancy.Holbrook@bp.com) <Nancy.Holbrook@bp.com>; Nick Avenetti (nick@perlite.com) <nick@perlite.com>; Phil Foss (phil.foss@onsemi.com) <phil.foss@onsemi.com>; Rick Stricker (rstricker@baf.com) <rstricker@baf.com>; Steve O'Brien (sobrien@baf.com) <sobrien@baf.com>; Tommy Brooks (tbrooks@cablehuston.com) <tbrooks@cablehuston.com>; Beth@cmsnaturalgas.com; Chuck Gates [redacted] [redacted]; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; mary mccordic@shell.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; Robert Pierce (robert.pierce@shell.com) <robert.pierce@shell.com>; Rusty Williams (williwk@bp.com) <williwk@bp.com>; SteveHarper@thisisnoble.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Alex Koleber; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Brad Troup <Brad.L.Troup@tsocorp.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@NipponDynawave.com>; Briane Keene <BrianR.Keene@Airliquide.com>; Bruce Martin <bruce.martin@westrock.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Cynthia Leon <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Dan Riley <daniel.t.riley@tsocorp.com>; Dave Post <Dave.Post@wahchang.com>; David Barge <David.A.Barge@tsocorp.com>; David Elliot <davidelliott@boisebuilding.com>; Delee Shoemaker <delees@microsoft.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <Don.Sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@precastcorp.com>; Ernesto M Negrete <Ernesto.M.NegretePapadakis@tsocorp.com>; Gary Collison <GCollison@pccstructurals.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; JaDPrice <JaDPrice@GAPAC.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; Justen Rainey <JustenR@pacounsel.org>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.org>; Mark Steele <steele@norpac.com>; Marty Sedler <marty.sedler@intel.com>; Matt Ruckwardt <mruckwardt@schn.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Broughton <michael.l.broughton@boeing.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@RockTenn.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.Slattery@evrazna.com>; Mike Hale <Michael.Hale@Simplot.com>; Mitch Maynard <mmaynard@DeltaEnergyllc.com>; Public Affairs Counsel <pac@pacounsel.org>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <PLydon@LHS.org>; Pat Ortiz <Patrick.Ortiz@kapstonepaper.com>; Patrick Loupin <PatrickLoupin@PackagingCorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@Ralphsaperstein.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Sandi Swarthout <sswarthout@capconn.net>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <Scott.R.Hawley@tsocorp.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Spiro E Xenos <spiro.e xenos@boeing.com>; Steve Wood <S.Wood@resolutefp.com>; Steven Castracane <steven.castracane@linde.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tony Hardenbrook; Tyler C. Pepple <tcp@dvclaw.com>; Wes Hill <Wes.Hill@gapac.com>; William McMahon <william.mcmahon@ipaper.com>; Chad Stokes <cstokes@cablehuston.com>; Ron Tarver <ron.tarver@swansongroup.biz>

Subject: AWEC Annual Member Meeting

When: Tuesday, November 12, 2019 9:00 AM-4:30 PM (UTC-07:00) Mountain Time (US & Canada).

Where: Seattle: TBD

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*

From: Kelly Francone <kfrancone@energystrat.com>
Sent time: 11/15/2018 11:30:25 AM
To: Tony Hardenbrook
Cc: John Carr <jcarr@awec.solutions>; Kim Ignjatovic <kignjatovic@energystrat.com>; Paul Langley; Boz Van Houten; Desiree Higgins; Alex Koleber
Subject: RE: AWEC Membership

Thanks very much.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Tony Hardenbrook [mailto:aharden2@uoregon.edu]
Sent: Thursday, November 15, 2018 12:31 PM
To: Kelly Francone
Cc: 'John Carr'; 'Kim Ignjatovic'; Paul Langley; Boz Van Houten; Desiree Higgins; Alex Koleber
Subject: RE: AWEC Membership

Hi Kelly, thanks for the welcome message!

The people at UO that I would like to receive messages:

Tony Hardenbrook
Paul Langley
Boz Van Houten
Alex Koleber

They are Cc'd on this email.

Also Cc'd is Desiree Higgins, who can work with you for getting our membership paid.

R/
Tony

From: Kelly Francone <kfrancone@energystrat.com>
Sent: Thursday, November 15, 2018 10:36 AM
To: Tony Hardenbrook <aharden2@uoregon.edu>
Cc: 'John Carr' <jcarr@awec.solutions>; 'Kim Ignjatovic' <kignjatovic@energystrat.com>
Subject: AWEC Membership

Tony,

Welcome to AWEC. We are excited to have the University of Oregon as a member. Please let me know, besides yourself, who you would like to receive our energy briefs, newsletters, member and meeting information, etc, and send their email addresses to me.

Also, what is the process for invoicing the University when we begin in January? Is there a process we need to go through to set up an account or Purchase Order, or a party we directly invoice? Thank you for your help.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 11/19/2018 01:09:36 PM

To: Aldis.Raisters@gapac.com; Alicia Givens (agivens@pacounsel.org) <agivens@pacounsel.org>; Ben Byman (Ben.Byman@lvpnp.com) <Ben.Byman@lvpnp.com>; Bill Castleberry (Bill.Castleberry@emeraldmaterials.com) <Bill.Castleberry@emeraldmaterials.com>; Bill Smith (Bill.Smith@airliquide.com) <Bill.Smith@airliquide.com>; Boz (vanhoutb@ohsu.edu) <vanhoutb@ohsu.edu>; Brad Beavers (bbeavers@timberproducts.com) <bbeavers@timberproducts.com>; Bruce Wittmann (WittmannConsultingLLC@outlook.com) <WittmannConsultingLLC@outlook.com>; Chad Sorber (sorber@ohsu.edu) <sorber@ohsu.edu>; Charley Hathaway (charley.hathaway@nwpsllc.com) <charley.hathaway@nwpsllc.com>; Chris Horn (chris_h@columbiasteel.com) <chris_h@columbiasteel.com>; Craig Anneberg (Craig.anneberg@norpacpaper.com) <Craig.anneberg@norpacpaper.com>; David Clemens (David.Clemens@darigold.com) <David.Clemens@darigold.com>; David Mitcheltree (DBM@EESconsulting.com) <DBM@EESconsulting.com>; David Tobin (DavidTobin@BoisePaper.com) <DavidTobin@BoisePaper.com>; Dennis (Dennis.Draleau@recsilicon.com) <Dennis.Draleau@recsilicon.com>; Drew Bryck (drew.m.bryck@boeing.com) <drew.m.bryck@boeing.com>; Eric Streicher (Eric.Streicher@Airgas.com) <Eric.Streicher@Airgas.com>; Fawn Barrie (fbarrie@legadv.com) <fbarrie@legadv.com>; Graham Bailey (graham.bailey@nippondynawave.com) <graham.bailey@nippondynawave.com>; Hugh.O.Pierce@tsocorp.com; Janese Pearson (Janese.Pierson@ipaper.com) <Janese.Pierson@ipaper.com>; Jeff Johnson (Jeff.Johnson@recsilicon.com) <Jeff.Johnson@recsilicon.com>; Jenifer Suffridge (jenifer.suffridge@shell.com) <jenifer.suffridge@shell.com>; Jennifer (jenny@pacounsel.org) <jenny@pacounsel.org>; Jennifer Hackett (Jena.Hackett@ipaper.com) <Jena.Hackett@ipaper.com>; John Bob (John.Bob@am.dynonobel.com) <John.Bob@am.dynonobel.com>; John Latimer (john.latimer@shell.com) <john.latimer@shell.com>; Josh Weber (jdw@dvclaw.com) <jdw@dvclaw.com>; Karen Vaughn (Karen.Vaughn@gapac.com) <Karen.Vaughn@gapac.com>; Keith Warner (keith.c.warner@boeing.com) <keith.c.warner@boeing.com>; kwilson@legadv.com; Ken Dey (ken.dey@simplot.com) <ken.dey@simplot.com>; Ken Johnson (ken.johnson@recsilicon.com) <ken.johnson@recsilicon.com>; Khaly Niang (Khaly.Niang@airliquide.com) <Khaly.Niang@airliquide.com>; Larry Voos (larry.voos@norpacpaper.com) <larry.voos@norpacpaper.com>; Laura Jane Schaefer (schaefel@ohsu.edu) <schaefel@ohsu.edu>; Marcie Peters (marcie.peters@solvay.com) <marcie.peters@solvay.com>; Mark Roeter (Mark_R@columbiasteel.com) <Mark_R@columbiasteel.com>; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; Matt Upmeyer (matt.upmeyer@lambweston.com) <matt.upmeyer@lambweston.com>; Nick Kaiser (Nick.Kaiser@NipponDynawave.com) <Nick.Kaiser@NipponDynawave.com>; Noel.Mak@ATImetals.com; Randy Clancy (clancyrb@airproducts.com) <clancyrb@airproducts.com>; Rob Buckingham (rob.buckingham@norpacpaper.com) <rob.buckingham@norpacpaper.com>; Samuel.Liebelt@kapstonepaper.com; Sarah Schack (sschack@timberproducts.com) <sschack@timberproducts.com>; Skylar (Skyler.Mlasko@northwesthardwoods.com) <Skyler.Mlasko@northwesthardwoods.com>; Stan Jackson (S.Jackson@shell.com) <S.Jackson@shell.com>; todd.wiseman@solvay.com; tom@richlandpaper.com; Trudy Slagle (trudy.slagle@lambweston.com) <trudy.slagle@lambweston.com>; Tyne Brownlow (tyne.brownlow@ipaper.com) <tyne.brownlow@ipaper.com>; Bill Gilmore (billmg@penwool.com) <billmg@penwool.com>; Clay Riding (clayr@nw-iw.com) <clayr@nw-iw.com>; Daryll Fuentes (dfuentes@usg.com) <dfuentes@usg.com>; David Hawk ([redacted] <[redacted]; David Jones (david.jones@swansongroup.biz) <david.jones@swansongroup.biz>; Ed Coghlan (Ed.coghlan@onsemi.com) <Ed.coghlan@onsemi.com>; Jake Evans (Jake.evans@onsemi.com) <Jake.evans@onsemi.com>; Jared Sommer (sommerj@byui.edu) <sommerj@byui.edu>; Jim Duke (jduke@idahoan.com) <jduke@idahoan.com>; Joe Burrell (Joseph.g.burrell@jci.com) <Joseph.g.burrell@jci.com>; Kyle Williams (williamsk@byui.edu) <williamsk@byui.edu>; Nancy Holbrook (Nancy.Holbrook@bp.com) <Nancy.Holbrook@bp.com>; Nick Avenetti (nick@perlite.com) <nick@perlite.com>; Phil Foss (phil.foss@onsemi.com) <phil.foss@onsemi.com>; Rick Stricker (rstricker@baf.com) <rstricker@baf.com>; Steve O'Brien (sobrien@baf.com) <sobrien@baf.com>; Tommy Brooks (tbrooks@cablehuston.com) <tbrooks@cablehuston.com>; Beth@cmsnaturalgas.com; Chuck Gates [redacted]; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; mary mccordic@shell.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; Robert Pierce (robert.pierce@shell.com) <robert.pierce@shell.com>; Rusty Williams (williwk@bp.com) <williwk@bp.com>; SteveHarper@thisisnoble.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Alex Koleber; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Brad Troup <Brad.L.Troup@tsocorp.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@NipponDynawave.com>; Briane Keene <BrianR.Keene@Airliquide.com>; Bruce Martin <bruce.martin@westrock.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Cynthia Leon <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Dan Riley <daniel.t.riley@tsocorp.com>; Dave Post <Dave.Post@wahchang.com>; David Barge <David.A.Barge@tsocorp.com>; David Elliot <davidelliott@boisebuilding.com>; Delee Shoemaker <delees@microsoft.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <Don.Sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@precastcorp.com>; Ernesto M Negrete <Ernesto.M.NegretePapadakis@tsocorp.com>; Gary Collison <GCollison@pccstructurals.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; JaDPrice <JaDPrice@GAPAC.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; Justen Rainey <JustenR@pacounsel.org>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.org>; Mark Steele <steele@norpac.com>; Marty Sedler <marty.sedler@intel.com>; Matt Ruckwardt <mruckwardt@schn.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Broughton <michael.l.broughton@boeing.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@RockTenn.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.Slattery@evrazna.com>; Mike Hale <Michael.Hale@Simplot.com>; Mitch Maynard <mmaynard@DeltaEnergyllc.com>; Public Affairs Counsel <pac@pacounsel.org>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <PLydon@LHS.org>; Pat Ortiz <Patrick.Ortiz@kapstonepaper.com>; Patrick Loupin <PatrickLoupin@PackagingCorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@Ralphsaperstein.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Sandi Swarthout <sswarthout@capconn.net>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <Scott.R.Hawley@tsocorp.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Spiro E Xenos <spiro.e xenos@boeing.com>; Steve Wood <S.Wood@resolutefp.com>; Steven Castracane <steven.castracane@linde.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tony Hardenbrook; Tyler C. Pepple <tcp@dvclaw.com>; Wes Hill <Wes.Hill@gapac.com>; William McMahon <william.mcmahon@ipaper.com>; Chad Stokes <cstokes@cablehuston.com>; Ron Tarver <ron.tarver@swansongroup.biz>

Subject: AWEC Electric Energy Users Meeting

When: Friday, June 07, 2019 9:00 AM-2:30 PM (UTC-07:00) Mountain Time (US & Canada).

Where: Skamania Lodge

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 11/15/2018 04:04:34 PM

To: Aldis.Raisters@gapac.com; Hugh.O.Pierce@tsocorp.com; kwilson@legadv.com; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; mruckwardt@schn.com; Noel.Mak@ATImetals.com; Samuel.Liebelt@kapstonepaper.com; todd.wiseman@solvay.com; tom@richlandpaper.com; Aldis.Raisters@gapac.com; jeff.steed@northwesthardwoods.com; Mark_R@columbiasteel.com; Martha_C@columbiasteel.com; mike.kuhn@westrock.com; Noel.Mak@ATImetals.com; Samuel.Liebelt@kapstonepaper.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; mary.mccordic@shell.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; SteveHarper@thisisnoble.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Alex Koleber; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials com>; Bill Smith <Bill.Smith@airliquide.com>; Boz <vanhoutb@ohsu.edu>; Brad Beavers <bbeavers@timberproducts.com>; Brad Troup <Brad.L.Troup@tsocorp.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@NipponDynawave.com>; Briane Keene <BrianR.Keene@airliquide.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <WittmannConsultingLLC@outlook.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Chad Sorber <sorber@ohsu.edu>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leon <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Dan Riley <daniel.t.riley@tsocorp.com>; Dave Post <Dave.Post@wahchang.com>; David Barge <David.A.Barge@tsocorp.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Mitcheltree <DBM@EESconsulting.com>; David Tobin <DavidTobin@BoisePaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <Don.Sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@precastcorp.com>; Eric Streicher <Eric.Streicher@Airgas.com>; Ernesto M Negrete <Ernesto.M.NegretePapadakis@tsocorp.com>; Fawn Barrie <fbarrie@legadv.com>; Gary Collison <GCollison@pccstructurals.com>; Graham Bailey <graham.bailey@NipponDynawave.com>; Greg Miller <greg.miller@weyerhaeuser.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; JaDPrice <JaDPrice@gapac.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell.com>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.org>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Marty Sedler <marty.sedler@intel.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Broughton <michael.l.broughton@boeing.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@RockTenn.com>; Michael Kuhn <mkuhn@RockTenn.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.Slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@DeltaEnergyllc.com>; Nick Kaiser <Nick.Kaiser@NipponDynawave.com>; Public Affairs Counsel <pac@pacounsel.org>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <PLydon@LHS.org>; Pat Ortiz <Patrick.Ortiz@kapstonepaper.com>; Patrick Loupin <PatrickLoupin@PackagingCorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@Ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Sandi Swarthout <sswarthout@capconn.net>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <Scott.R.Hawley@tsocorp.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steve Wood <S.Wood@resolutefp.com>; Steven Castracane <steven.castracane@linde.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tony Hardenbrook; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; William McMahon <william.mcmahon@ipaper.com>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Gilmore <billmg@penwool.com>; Boz <vanhoutb@ohsu.edu>; Brian Wood <brian.wood@NipponDynawave.com>; Brian Wood <brian.wood@NipponDynawave.com>; Bruce Martin <bruce.martin@westrock.com>; Calli Daly <calli.daly@kochps.com>; Chad Sorber <sorber@ohsu.edu>; Chad Stokes <cstokes@cablehuston.com>; Charley <[redacted]>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <chris_h@columbiasteel.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; Dave Rickman <dave.rickman@kaisertwd.com>; David Clemens <David.Clemens@darigold.com>; David Hawk <[redacted]; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Dave Post <Dave.Post@wahchang.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <don.sturtevant@simplot.com>; Drew Bryck <drew.m.bryck@boeing.com>; Ed Coghlan <Ed.coghlan@onsemi.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@precastcorp.com>; Gary Collison <GCollison@pccstructurals.com>; Greg Miller <greg.miller@weyerhaeuser.com>; Greg Takisaki <Greg.takasaki@kaisertwd.com>; Jake Evans <Jake.evans@onsemi.com>; JaDPrice <JaDPrice@gapac.com>; Jared Sommer <sommerj@byui.edu>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jennifer <jenny@pacounsel.org>; Jim Duke <jduke@idahoan.com>; JL Wilson <jlwilson@pacounsel.org>; Joe Burrell <Joseph.g.burrell@jci.com>; John Carr <jcarr@awec.solutions>; John Latimer <john.latimer@shell.com>; Justen Rainey <justenr@pacounsel.org>; Keith Warner <keith.c.warner@boeing.com>; Kristine Dippold <Kristine.A.Dippold@boeing.com>; Kyle Williams <williamsk@byui.edu>; Laura Jane Schaefer <schaefel@ohsu.edu>; Mark Dunn <mark.dunn@simplot.com>; Mark Steele <steele@norpac.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Michael Broughton <michael.l.broughton@boeing.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Mike Hale <Michael.Hale@simplot.com>; Nick Avenetti <nick@perlite.com>; Kaiser, Nick <Nick.Kaiser@NipponDynawave.com>; Pat Lydon

<PLydon@LHS.org>; Pat Ortiz <Patrick.Ortiz@kapstonepaper.com>; Phil Foss <phil.foss@onsemi.com>; Phil Zirngibl <Pzirngi@gapac.com>; Rick Stricker <rstricker@baf.com>; Sarah Schack <sschack@timberproducts.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Stan Jackson <S.Jackson@shell.com>; Tim Boyd <[redacted]; Tom Rouleau <Tom.Rouleau@darigold.com>; Tommy Brooks <tbrooks@cablehuston.com>; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Chuck Gates [redacted] Nancy Richardson <Nancy.Holbrook@bp.com>; Robert Pierce <robert.pierce@shell.com>; Rusty Williams <williwk@bp.com>

Cc: John Carr <jcarr@awec.solutions>; Ed Finklea <efinklea@awec.solutions>

Subject: AWEC Natural Gas Interruption Update

Attachments: AWEC Gas Interruption Update.docx

AWEC members,

Please see the attached memo regarding new information on the pipeline, from our Natural Gas Director, Ed Finklea.

Please let him know if you have questions.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

AWEC
Alliance of Western Energy Consumers ◆ 818 SW 3rd Avenue, #266 ◆ Portland, OR 97204 ◆ 971-544-7169 ◆ nwenergyusers.org

Memorandum:

To: Alliance of Western Energy Consumer Members

From: Ed Finklea

Re: Natural Gas Service on Northwest Pipeline – Update

Date: November 15, 2018

You may be aware that today Enbridge cut deliveries by 300,000 MMBtu/day and the NW Pipeline at 3% entitlements. I have obtained information regarding this development. Enbridge is conducting an integrity dig of a section of the pipeline adjacent to the rupture. That work requires a pressure reduction to 60% from 80% while the work is being completed. This is for worker safety. The integrity dig must be done now to meet the "end of November" goal for getting the line back to 1.2 Bcf/day at Sumas.

This event will only last a number of days. Market prices reflect the loss of the 300,000 in the day market. NW Pipeline has posted the availability of gas through its Park and Loan system. This system could be used as an alternative to buying very expensive gas in the day market for the next few days. AWEC members of course must make their own decisions, but the availability of Park and Loan service may not be familiar in the Pacific Northwest, so you may need to look into this with your marketer if you are a transportation customer.

Until this integrity dig is completed, we will not know if the rupture was confined to a single dent or if there are signs that the problem is on a broader section of the line, such as stress crack fractures that could be discovered as part of the visual inspection. These facts only add to the degree of seriousness associated with recovering from the incident. I am happy to discuss details with members with questions.

Regards,

Ed Finklea
AWEC Natural Gas Director

From: Kelly Francone <kfrancone@energystrat.com>
Sent time: 11/19/2018 09:17:25 AM
To: Tony Hardenbrook
Subject: RE: AWEC Membership

Tony can you provide me with your phone number so I can have it in my contacts?

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Tony Hardenbrook [mailto:aharden2@uoregon.edu]
Sent: Thursday, November 15, 2018 12:31 PM
To: Kelly Francone
Cc: 'John Carr'; 'Kim Ignjatovic'; Paul Langley; Boz Van Houten; Desiree Higgins; Alex Koleber
Subject: RE: AWEC Membership

Hi Kelly, thanks for the welcome message!

The people at UO that I would like to receive messages:

Tony Hardenbrook
Paul Langley
Boz Van Houten
Alex Koleber

They are Cc'd on this email.

Also Cc'd is Desiree Higgins, who can work with you for getting our membership paid.

R/
Tony

From: Kelly Francone <kfrancone@energystrat.com>
Sent: Thursday, November 15, 2018 10:36 AM
To: Tony Hardenbrook <aharden2@uoregon.edu>
Cc: 'John Carr' <jcarr@awec.solutions>; 'Kim Ignjatovic' <kignjatovic@energystrat.com>
Subject: AWEC Membership

Tony,

Welcome to AWEC. We are excited to have the University of Oregon as a member. Please let me know, besides yourself, who you would like to receive our energy briefs, newsletters, member and meeting information, etc, and send their email addresses to me.

Also, what is the process for invoicing the University when we begin in January? Is there a process we need to go through to set up an account or Purchase Order, or a party we directly invoice? Thank you for your help.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 11/08/2018 10:16:23 AM

To: Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; mary.mccordic@shell.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; SteveHarper@thisisnoble.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Bill Gilmore <billmg@penwool.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Ed Coghlan <Ed.coghlan@onsemi.com>; Jake Evans <Jake.evans@onsemi.com>; Jared Sommer <sommerj@byui.edu>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kyle Williams <williamsk@byui.edu>; Nick Avenetti <nick@perlite.com>; Rick Stricker <rstricker@baf.com>; Sam Merrick <merrricks@byui.edu>; Steve O'Brien <sobrien@baf.com>; Tony Hardenbrook; Chuck Gates [redacted]; Nancy Richardson <RicharND@bp.com>; Robert Pierce <robert.pierce@shell.com>; Rusty Williams <williwk@bp.com>; Tyler C. Pepple <tcp@dvclaw.com>; Scott Gutting <sgutting@energystrat.com>; Chad Stokes <cstokes@cablehuston.com>; Tommy Brooks <tbrooks@cablehuston.com>; Kelly Francone <kfrancone@energystrat.com>

Cc: John Carr <jcarr@awec.solutions>

Subject: AWEC Natural Gas Energy Brief

AWEC NATURAL GAS ENERGY BRIEF

You are receiving this energy brief provided by Energy Strategies because you are a contributing natural gas member of AWEC

Enbridge finishes repairs at ruptured pipeline in British Columbia, Sibyl Layag - SNL

Enbridge Inc. has completed repairs on the natural gas transmission pipeline that ruptured in British Columbia Oct. 9, allowing it to begin the process of restarting the line.

The company will perform a comprehensive integrity assessment before it starts returning the pipeline to service, which is expected to occur within 48 hours, Enbridge said in an Oct. 31 news release. The pipeline restart process involves gradually increasing gas flows through the repaired segment until the pressure reaches 80% of normal operating levels.

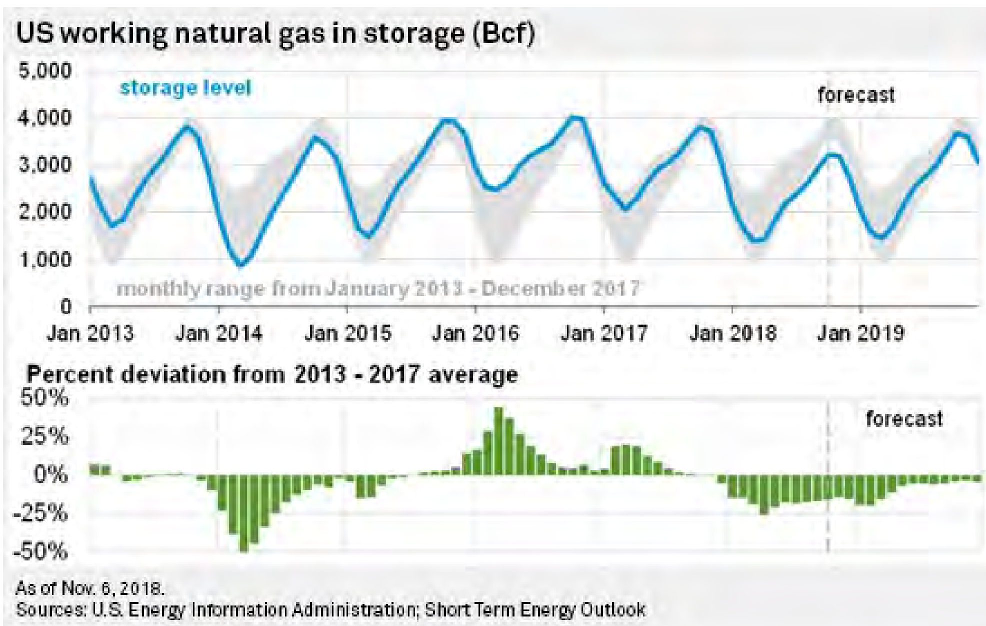
A smaller pipeline running alongside the repaired pipeline returned to service at 80% of its normal operating pressure on Oct. 11 after it was shuttered as a safety precaution. Before returning both pipelines to full capacity, Enbridge will launch a dig program at select locations along the smaller pipeline to evaluate the integrity of the system.

The pipeline rupture near Prince George, British Columbia, ignited and caused the evacuation of a First Nation community in the area. It also affected supplies for gas utility customers in British Columbia and the Pacific Northwest.

Price volatility perks up as US heads into winter with less gas in storage, Bill Holland - SNL

Some price volatility has returned to natural gas futures contracts as the U.S. heads into winter with the lowest level of gas in storage since 2005, the U.S. Energy Information Administration said Nov. 6, but record amounts of gas production will keep a lid on prices throughout 2019.

Volatility in gas futures prices averaged 38.7% in October, a return to normal levels of price swings after record low volatility over the summer, as traders began to worry about whether the 3.2 Tcf of gas in Lower 48 storage would be enough to handle winter demand. "Record natural gas production growth and production levels helped to reduce concerns about supply availability and kept prices in a narrow trading range" for most of 2018, the EIA said.



Increased demand from the power sector and LNG exports have sucked up most of the record 2018 gas production, leaving little gas to make up a storage deficit from 2017, the EIA's November "Short-Term Energy Outlook" said. "Volatility re-emerged as the end of the injection period approached with inventories still lower than historical levels."

"Higher demand helped to keep storage levels low heading into winter, which put upward pressure on prices," the EIA added, noting that gas in underground storage finished the injection season in October 16.9% lower than the five-year average and 16.5% lower than 2017's

injection-season ending level.

The EIA estimated that U.S. dry gas production averaged 86.9 Bcf/d in October and will average 83.2 Bcf/d for full year 2018, up 11% from 2017 and a record production level, with the pace of the increase also a record. The EIA expects production to grow 7.7% in 2019 to 89.6 Bcf/d.

"EIA expects Henry Hub natural gas spot prices to average $2.98/MMBtu in 2019, down 4 cents from the 2018 average and down from a forecast average price of $3.25/MMBtu in the fourth quarter of 2018," the EIA said.

No room for coal': Wind, solar, gas seen as cheapest US power without subsidies, Garrett Hering - SNL

Wind energy is America's overall lowest-cost source of new power generation, when not considering incentives, while solar and natural gas-fired facilities are also the cheapest options across wide swaths of the country, according to new analysis from the Energy Institute at the University of Texas at Austin.

"This shows why, even in coal country, nobody is building coal," said Joshua Rhodes, a research fellow at the Energy Institute whose recent analysis yielded roughly 20% and 40% cost declines for wind and solar, respectively, compared to a 2016 Energy Institute report on the levelized cost of electricity. "With gas and renewables in the system there's just no room for coal anywhere."

The update almost eliminated coal from the institute's interactive online map of lowest-cost new power sources throughout the United States and broadened the footprint of wind and solar as the least-expensive technologies in the county-by-county analysis. On an unsubsidized, levelized-cost basis, wind farms in Colorado, Kansas, Oklahoma and Texas are the nation's cheapest generation sources, with the cheapest wind in those states ranging from $46.76/MWh to around $48.85/MWh, the research found.

The cheapest new gas generation, according to the University of Texas' updated data, would be combined-cycle facilities in Idaho, Washington, Montana

and Oregon at \$52.50/MWh to \$53.61/MWh. The lowest-cost U.S. solar farms, located in New Mexico, Arizona, Texas and Colorado, ranged from \$62.79/MWh to \$64.36/MWh. The only places new coal generation would be the cheapest option are three remote counties of Washington state, with levelized costs around \$111/MWh. The analysis does not view new nuclear power as the most cost-effective technology anywhere in the country.

The research results align with other recent data that contradict President Donald Trump's claims of creating a "vibrant" U.S. coal sector, one of his central promises. It also comes as wind and solar developers face a phasedown of key federal tax incentives that have helped to fuel record levels of renewable energy additions in recent years.

The production tax credit for wind power, which dropped 20% to 1.9 cents/kWh in 2017, fell by 40% for projects starting construction in 2018 and falls 60% for projects breaking ground in 2019. The 30% investment tax credit, meanwhile, drops to 26% for commercial and utility-scale solar projects commencing construction in 2020, to 22% in 2021 and to 10% thereafter.

While the Energy Institute's analysis appears to bode well for the future competitiveness of wind and solar as federal tax incentives phase down, experts remain split on how the real impact may play out in the marketplace. Analysts from Bloomberg NEF, IHS Markit and Navigant Consulting, for instance, recently presented wildly diverging views on future solar capacity additions as the investment tax incentive declines for businesses and zeroes out for homeowners. IHS, the most bearish of the three on solar, also foresees a plunge in wind investment post-federal tax breaks.

The University of Texas analysis is part of an ongoing multi-study initiative on the "full cost of electricity," including direct capital costs and indirect "external" costs of fossil fuel emissions on human health and the environment. When incorporating external costs, which the Energy Institute pegs at \$62/ton of carbon dioxide in its reference case, new wind and solar generation become the lowest-cost resources across the vast majority of the

country.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From:	Kelly Francone <kfrancone@energystrat.com>
Sent time:	11/19/2018 10:29:40 AM
To:	Tony Hardenbrook
Subject:	RE: AWEC Membership

Thank you

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Tony Hardenbrook [mailto:aharden2@uoregon.edu]
Sent: Monday, November 19, 2018 11:16 AM
To: Kelly Francone
Subject: RE: AWEC Membership

Tony Hardenbrook
Director of Utilities and Energy
Campus Planning and Facilities Management
University of Oregon
aharden2@uoregon.edu
541-346-9007

Safety * Continuity * Efficiency

From: Kelly Francone <kfrancone@energystrat.com>
Sent: Monday, November 19, 2018 9:17 AM
To: Tony Hardenbrook <aharden2@uoregon.edu>
Subject: RE: AWEC Membership

Tony can you provide me with your phone number so I can have it in my contacts?

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Tony Hardenbrook [mailto:aharden2@uoregon.edu]
Sent: Thursday, November 15, 2018 12:31 PM
To: Kelly Francone
Cc: 'John Carr'; 'Kim Ignjatovic'; Paul Langley; Boz Van Houten; Desiree Higgins; Alex Koleber
Subject: RE: AWEC Membership

Hi Kelly, thanks for the welcome message!

The people at UO that I would like to receive messages:

Tony Hardenbrook
Paul Langley
Boz Van Houten
Alex Koleber

They are Cc'd on this email.

Also Cc'd is Desiree Higgins, who can work with you for getting our membership paid.

R/
Tony

From: Kelly Francone <kfrancone@energystrat.com>
Sent: Thursday, November 15, 2018 10:36 AM
To: Tony Hardenbrook <aharden2@uoregon.edu>
Cc: 'John Carr' <jcarr@awec.solutions>; 'Kim Ignjatovic' <kignjatovic@energystrat.com>
Subject: AWEC Membership

Tony,

Welcome to AWEC. We are excited to have the University of Oregon as a member. Please let me know, besides yourself, who you would like to receive our energy briefs, newsletters, member and meeting information, etc, and send their email addresses to me.

Also, what is the process for invoicing the University when we begin in January? Is there a process we need to go through to set up an account or Purchase Order, or a party we directly invoice? Thank you for your help.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 11/19/2018 01:07:06 PM

To: Bill Gilmore (billmg@penwool.com) <billmg@penwool.com>; Clay Riding (clayr@nw-iw.com) <clayr@nw-iw.com>; Daryll Fuentes (dfuentes@usg.com) <dfuentes@usg.com>; David Hawk ([redacted] <[redacted]; David Jones (david.jones@swansongroup.biz) <david.jones@swansongroup.biz>; Ed Coghlan (Ed.coghlan@onsemi.com) <Ed.coghlan@onsemi.com>; Jake Evans (Jake.evans@onsemi.com) <Jake.evans@onsemi.com>; Jared Sommer (sommerj@byui.edu) <sommerj@byui.edu>; Jim Duke (jduke@idahoan com) <jduke@idahoan.com>; Joe Burrell (Joseph.g.burrell@jci.com) <Joseph.g.burrell@jci.com>; Kyle Williams (williamsk@byui.edu) <williamsk@byui.edu>; Nancy Holbrook (Nancy.Holbrook@bp.com) <Nancy.Holbrook@bp.com>; Nick Avenetti (nick@perlite.com) <nick@perlite.com>; Phil Foss (phil.foss@onsemi.com) <phil.foss@onsemi.com>; Rick Stricker (rstricker@baf.com) <rstricker@baf.com>; Steve O'Brien (sobrien@baf.com) <sobrien@baf.com>; Tommy Brooks (tbrooks@cablehuston.com) <tbrooks@cablehuston.com>; Aldis.Raisters@gapac.com; Alicia Givens (agivens@pacounsel.org) <agivens@pacounsel.org>; Ben Byman (Ben.Byman@lvpnp.com) <Ben.Byman@lvpnp.com>; Bill Castleberry (Bill.Castleberry@emeraldmaterials.com) <Bill.Castleberry@emeraldmaterials.com>; Bill Smith (Bill.Smith@airliquide.com) <Bill.Smith@airliquide.com>; Boz (vanhoutb@ohsu.edu) <vanhoutb@ohsu.edu>; Brad Beavers (bbeavers@timberproducts.com) <bbeavers@timberproducts.com>; Bruce Wittmann (WittmannConsultingLLC@outlook.com) <WittmannConsultingLLC@outlook.com>; Chad Sorber (sorber@ohsu.edu) <sorber@ohsu.edu>; Charley Hathaway (charley.hathaway@nwpsllc.com) <charley.hathaway@nwpsllc.com>; Chris Horn (chris_h@columbiasteel.com) <chris_h@columbiasteel.com>; Craig Anneberg (Craig.anneberg@norpacpaper com) <Craig.anneberg@norpacpaper.com>; David Clemens (David.Clemens@darigold.com) <David.Clemens@darigold.com>; David Mitcheltree (DBM@EESconsulting com) <DBM@EESconsulting.com>; David Tobin (DavidTobin@BoisePaper.com) <DavidTobin@BoisePaper.com>; Dennis (Dennis.Draleau@recsilicon.com) <Dennis.Draleau@recsilicon.com>; Drew Bryck (drew.m.bryck@boeing.com) <drew.m.bryck@boeing.com>; Eric Streicher (Eric.Streicher@Airgas.com) <Eric.Streicher@Airgas.com>; Fawn Barrie (fbarrie@legadv.com) <fbarrie@legadv.com>; Graham Bailey (graham.bailey@nippondynawave.com) <graham.bailey@nippondynawave.com>; Hugh.O.Pierce@tsocorp.com; Janese Pearson (Janese.Pierson@ipaper.com) <Janese.Pierson@ipaper.com>; Jeff Johnson (Jeff.Johnson@recsilicon.com) <Jeff.Johnson@recsilicon.com>; Jenifer Suffridge (jenifer.suffridge@shell.com) <jenifer.suffridge@shell.com>; Jennifer (jenny@pacounsel.org) <jenny@pacounsel.org>; Jennifer Hackett (Jena.Hackett@ipaper.com) <Jena.Hackett@ipaper.com>; John Bob (John.Bob@am.dynonobel.com) <John.Bob@am.dynonobel.com>; John Latimer (john.latimer@shell.com) <john.latimer@shell.com>; Josh Weber (jdw@dvclaw.com) <jdw@dvclaw.com>; Karen Vaughn (Karen.Vaughn@gapac.com) <Karen.Vaughn@gapac.com>; Keith Warner (keith.c.warner@boeing.com) <keith.c.warner@boeing.com>; kwilson@legadv.com; Ken Dey (ken.dey@simplot.com) <ken.dey@simplot.com>; Ken Johnson (ken.johnson@recsilicon.com) <ken.johnson@recsilicon.com>; Khaly Niang (Khaly.Niang@airliquide.com) <Khaly.Niang@airliquide.com>; Larry Voos (larry.voos@norpacpaper.com) <larry.voos@norpacpaper.com>; Laura Jane Schaefer (schaefel@ohsu.edu) <schaefel@ohsu.edu>; Marcie Peters (marcie.peters@solvay.com) <marcie.peters@solvay.com>; Mark Roeter (Mark_R@columbiasteel.com) <Mark_R@columbiasteel.com>; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; Matt Upmeyer (matt.upmeyer@lambweston.com) <matt.upmeyer@lambweston.com>; Nick Kaiser (Nick.Kaiser@NipponDynawave.com) <Nick.Kaiser@NipponDynawave.com>; Noel.Mak@ATImetals.com; Randy Clancy (clancyrb@airproducts.com) <clancyrb@airproducts.com>; Rob Buckingham (rob.buckingham@norpacpaper.com) <rob.buckingham@norpacpaper.com>; Samuel.Liebelt@kapstonepaper.com; Sarah Schack (sschack@timberproducts.com) <sschack@timberproducts.com>; Skylar (Skyler.Mlasko@northwesthardwoods.com) <Skyler.Mlasko@northwesthardwoods.com>; Stan Jackson (S.Jackson@shell.com) <S.Jackson@shell.com>; todd.wiseman@solvay.com; tom@richlandpaper.com; Trudy Slagle (trudy.slagle@lambweston.com) <trudy.slagle@lambweston.com>; Tyne Brownlow (tyne.brownlow@ipaper.com) <tyne.brownlow@ipaper.com>; Beth@cmsnaturalgas.com; Chuck Gates [redacted] CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; mary.mccordic@shell.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; Robert Pierce (robert.pierce@shell.com) <robert.pierce@shell.com>; Rusty Williams (williwk@bp.com) <williwk@bp.com>; SteveHarper@thisisnoble.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Chad Stokes <cstokes@cablehuston.com>; Ed Finklea <efinklea@awec.solutions>; Ron Tarver <ron.tarver@swansongroup.biz>; Tony Hardenbrook; Tyler C. Pepple <tcp@dvclaw.com>; Alex Koleber; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Brad Troup <Brad.L.Troup@tsocorp.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@NipponDynawave.com>; Briane Keene <BrianR.Keene@Airliquide.com>; Bruce Martin <bruce.martin@westrock.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Cynthia Leon <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Dan Riley <daniel.t.riley@tsocorp.com>; Dave Post <Dave.Post@wahchang.com>; David Barge <David.A.Barge@tsocorp.com>; David Elliot <davidelliott@boisebuilding.com>; Delee Shoemaker <delees@microsoft.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <Don.Sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Eric Fuller <efuller@precastcorp.com>; Ernesto M Negrete <Ernesto.M.NegretePapadakis@tsocorp.com>; Gary Collison <GCollison@pccstructurals.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft com>; JaDPrice <JaDPrice@GAPAC.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; Justen Rainey <JustenR@pacounsel.org>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.org>; Mark Steele <steele@norpac.com>; Marty Sedler <marty.sedler@intel.com>; Matt Ruckwardt <mruckwardt@schn.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Broughton <michael.l.broughton@boeing.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@RockTenn.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.Slattery@evrazna.com>; Mike Hale <Michael.Hale@Simplot.com>; Mitch Maynard <mmaynard@DeltaEnergyllc.com>; Public Affairs Counsel <pac@pacounsel.org>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <PLydon@LHS.org>; Pat Ortiz <Patrick.Ortiz@kapstonepaper.com>; Patrick Loupin <PatrickLoupin@PackagingCorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@Ralphsaperstein.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Freres <rtfreres@frereslumber com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Sandi Swarthout <sswarthout@capconn.net>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <Scott.R.Hawley@tsocorp.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Steve Wood <S.Wood@resolutefp.com>; Steven Castracane <steven.castracane@linde.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Wes Hill

<Wes.Hill@gapac.com>; William McMahon <william.mcmahon@ipaper.com>

Subject: AWEC Gas User Meeting

When: Wednesday, June 05, 2019 9:00 AM-12:30 PM (UTC-07:00) Mountain Time (US & Canada).

Where: Skamania Lodge

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 11/19/2018 01:03:47 PM

To: Aldis.Raisters@gapac.com; Alicia Givens (agivens@pacounsel.org) <agivens@pacounsel.org>; Ben Byman (Ben.Byman@lvpnp.com) <Ben.Byman@lvpnp.com>; Bill Castleberry (Bill.Castleberry@emeraldmaterials.com) <Bill.Castleberry@emeraldmaterials.com>; Bill Smith (Bill.Smith@airliquide.com) <Bill.Smith@airliquide.com>; Boz (vanhoutb@ohsu.edu) <vanhoutb@ohsu.edu>; Brad Beavers (bbeavers@timberproducts.com) <bbeavers@timberproducts.com>; Bruce Wittmann (WittmannConsultingLLC@outlook.com) <WittmannConsultingLLC@outlook.com>; Chad Sorber (sorber@ohsu.edu) <sorber@ohsu.edu>; Charley Hathaway (charley.hathaway@nwpsllc.com) <charley.hathaway@nwpsllc.com>; Chris Horn (chris_h@columbiasteel.com) <chris_h@columbiasteel.com>; Craig Anneberg (Craig.anneberg@norpacpaper.com) <Craig.anneberg@norpacpaper.com>; David Clemens (David.Clemens@darigold.com) <David.Clemens@darigold.com>; David Mitcheltree (DBM@EESconsulting.com) <DBM@EESconsulting.com>; David Tobin (DavidTobin@BoisePaper.com) <DavidTobin@BoisePaper.com>; Dennis (Dennis.Draleau@recsilicon.com) <Dennis.Draleau@recsilicon.com>; Drew Bryck (drew.m.bryck@boeing.com) <drew.m.bryck@boeing.com>; Eric Streicher (Eric.Streicher@Airgas.com) <Eric.Streicher@Airgas.com>; Fawn Barrie (fbarrie@legadv.com) <fbarrie@legadv.com>; Graham Bailey (graham.bailey@nippondynawave.com) <graham.bailey@nippondynawave.com>; Hugh.O.Pierce@tsocorp.com; Janese Pearson (Janese.Pierson@ipaper.com) <Janese.Pierson@ipaper.com>; Jeff Johnson (Jeff.Johnson@recsilicon.com) <Jeff.Johnson@recsilicon.com>; Jenifer Suffridge (jenifer.suffridge@shell.com) <jenifer.suffridge@shell.com>; Jennifer (jenny@pacounsel.org) <jenny@pacounsel.org>; Jennifer Hackett (Jena.Hackett@ipaper.com) <Jena.Hackett@ipaper.com>; John Bob (John.Bob@am.dynonobel.com) <John.Bob@am.dynonobel.com>; John Latimer (john.latimer@shell.com) <john.latimer@shell.com>; Josh Weber (jdw@dvclaw.com) <jdw@dvclaw.com>; Karen Vaughn (Karen.Vaughn@gapac.com) <Karen.Vaughn@gapac.com>; Keith Warner (keith.c.warner@boeing.com) <keith.c.warner@boeing.com>; kwilson@legadv.com; Ken Dey (ken.dey@simplot.com) <ken.dey@simplot.com>; Ken Johnson (ken.johnson@recsilicon.com) <ken.johnson@recsilicon.com>; Khaly Niang (Khaly.Niang@airliquide.com) <Khaly.Niang@airliquide.com>; Larry Voos (larry.voos@norpacpaper.com) <larry.voos@norpacpaper.com>; Laura Jane Schaefer (schaefel@ohsu.edu) <schaefel@ohsu.edu>; Marcie Peters (marcie.peters@solvay.com) <marcie.peters@solvay.com>; Mark Roeter (Mark_R@columbiasteel.com) <Mark_R@columbiasteel.com>; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; Matt Upmeyer (matt.upmeyer@lambweston.com) <matt.upmeyer@lambweston.com>; Nick Kaiser (Nick.Kaiser@NipponDynawave.com) <Nick.Kaiser@NipponDynawave.com>; Noel.Mak@ATImetals.com; Randy Clancy (clancyrb@airproducts.com) <clancyrb@airproducts.com>; Rob Buckingham (rob.buckingham@norpacpaper.com) <rob.buckingham@norpacpaper.com>; Samuel.Liebelt@kapstonepaper.com; Sarah Schack (sschack@timberproducts.com) <sschack@timberproducts.com>; Skylar (Skyler.Mlasko@northwesthardwoods.com) <Skyler.Mlasko@northwesthardwoods.com>; Stan Jackson (S.Jackson@shell.com) <S.Jackson@shell.com>; todd.wiseman@solvay.com; tom@richlandpaper.com; Trudy Slagle (trudy.slagle@lambweston.com) <trudy.slagle@lambweston.com>; Tyne Brownlow (tyne.brownlow@ipaper.com) <tyne.brownlow@ipaper.com>; Bill Gilmore (billmg@penwool.com) <billmg@penwool.com>; Clay Riding (clayr@nw-iw.com) <clayr@nw-iw.com>; Daryll Fuentes (dfuentes@usg.com) <dfuentes@usg.com>; David Hawk ([redacted] <[redacted]; David Jones (david.jones@swansongroup.biz) <david.jones@swansongroup.biz>; Ed Coghlan (Ed.coghlan@onsemi.com) <Ed.coghlan@onsemi.com>; Jake Evans (Jake.evans@onsemi.com) <Jake.evans@onsemi.com>; Jared Sommer (sommerj@byui.edu) <sommerj@byui.edu>; Jim Duke (jduke@idahoan.com) <jduke@idahoan.com>; Joe Burrell (Joseph.g.burrell@jci.com) <Joseph.g.burrell@jci.com>; Kyle Williams (williamsk@byui.edu) <williamsk@byui.edu>; Nancy Holbrook (Nancy.Holbrook@bp.com) <Nancy.Holbrook@bp.com>; Nick Avenetti (nick@perlite.com) <nick@perlite.com>; Phil Foss (phil.foss@onsemi.com) <phil.foss@onsemi.com>; Rick Stricker (rstricker@baf.com) <rstricker@baf.com>; Steve O'Brien (sobrien@baf.com) <sobrien@baf.com>; Tommy Brooks (tbrooks@cablehuston.com) <tbrooks@cablehuston.com>; Beth@cmsnaturalgas.com; Chuck Gates [redacted] CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; mary mccordic@shell.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; Robert Pierce (robert.pierce@shell.com) <robert.pierce@shell.com>; Rusty Williams (williwk@bp.com) <williwk@bp.com>; SteveHarper@thisisnoble.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Alex Koleber; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Brad Troup <Brad.L.Troup@tsocorp.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@NipponDynawave.com>; Briane Keene <BrianR.Keene@Airliquide.com>; Bruce Martin <bruce.martin@westrock.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Cynthia Leon <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Dan Riley <daniel.t.riley@tsocorp.com>; Dave Post <Dave.Post@wahchang.com>; David Barge <David.A.Barge@tsocorp.com>; David Elliot <davidelliott@boisebuilding.com>; Delee Shoemaker <delees@microsoft.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <Don.Sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@precastcorp.com>; Ernesto M Negrete <Ernesto.M.NegretePapadakis@tsocorp.com>; Gary Collison <GCollison@pccstructurals.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; JaDPrice <JaDPrice@GAPAC.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; Justen Rainey <JustenR@pacounsel.org>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.org>; Mark Steele <steele@norpac.com>; Marty Sedler <marty.sedler@intel.com>; Matt Ruckwardt <mruckwardt@schn.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Broughton <michael.l.broughton@boeing.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@RockTenn.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.Slattery@evrazna.com>; Mike Hale <Michael.Hale@Simplot.com>; Mitch Maynard <mmaynard@DeltaEnergyllc.com>; Public Affairs Counsel <pac@pacounsel.org>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <PLydon@LHS.org>; Pat Ortiz <Patrick.Ortiz@kapstonepaper.com>; Patrick Loupin <PatrickLoupin@PackagingCorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@Ralphsaperstein.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Sandi Swarthout <sswarthout@capconn.net>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <Scott.R.Hawley@tsocorp.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Spiro E Xenos <spiro.e xenos@boeing.com>; Steve Wood <S.Wood@resolutefp.com>; Steven Castracane <steven.castracane@linde.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tony Hardenbrook; Tyler C. Pepple <tcp@dvclaw.com>; Wes Hill <Wes.Hill@gapac.com>; William McMahon <william.mcmahon@ipaper.com>; Chad Stokes <cstokes@cablehuston.com>; Ron Tarver <ron.tarver@swansongroup.biz>

Subject: AWEC Member Meeting

When: Wednesday, March 06, 2019 9:00 AM-4:30 PM (UTC-07:00) Mountain Time (US & Canada).

Where: Portland Sheraton Airport Hotel

Note: The GMT offset above does not reflect daylight saving time adjustments.

~~*~*~*~*~*~*~*~*

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 11/15/2018 02:52:03 PM

To: Aldis.Raisters@gapac.com; Hugh.O.Pierce@tsocorp com; kwilson@legadv.com; Martha_C@columbiasteel.com; marycatherine mcaleer@weyerhaeuser.com; mruckwardt@schn.com; Noel.Mak@ATImetals.com; Samuel.Liebelt@kapstonepaper.com; todd.wiseman@solvay.com; tom@richlandpaper com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; mary.mccordic@shell com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell com; SteveHarper@thisisnoble.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Alex Koleber; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials com>; Bill Smith <Bill.Smith@airliquide.com>; Boz <vanhoutb@ohsu.edu>; Brad Beavers <bbeavers@timberproducts.com>; Brad Troup <Brad.L.Troup@tsocorp.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@NipponDynawave.com>; Briane Keene <BrianR.Keene@airliquide.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <WittmannConsultingLLC@outlook.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Chad Sorber <sorber@ohsu.edu>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leon <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Dan Riley <daniel.t.riley@tsocorp.com>; Dave Post <Dave.Post@wahchang.com>; David Barge <David.A.Barge@tsocorp.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Mitcheltree <DBM@EESconsulting.com>; David Tobin <DavidTobin@BoisePaper com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <Don.Sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@precastcorp.com>; Eric Streicher <Eric.Streicher@Airgas.com>; Ernesto M Negrete <Ernesto.M.NegretePapadakis@tsocorp.com>; Fawn Barrie <fbarrie@legadv.com>; Gary Collison <GCollison@pccstructurals.com>; Graham Bailey <graham.bailey@NipponDynawave com>; Greg Miller <greg.miller@weyerhaeuser.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; JaDPrice <JaDPrice@gapac com>; Janese Pearson <Janese.Pierson@ipaper.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John Bob@am.dynonobel com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell com>; Josh Weber <jdw@dvclaw com>; Justen Rainey <JustenR@pacounsel.org>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide com>; Larry Voos <larry.voos@norpacpaper.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.org>; Mark Roeter <Mark_R@columbiasteel com>; Mark Steele <steele@norpac.com>; Marty Sedler <marty.sedler@intel.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick Houser@ipaper com>; Michael Broughton <michael l.broughton@boeing.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@RockTenn.com>; Michael Kuhn <mkuhn@RockTenn.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.Slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@DeltaEnergyllc.com>; Nick Kaiser <Nick.Kaiser@NipponDynawave.com>; Public Affairs Counsel <pac@pacounsel.org>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <PLydon@LHS.org>; Pat Ortiz <Patrick.Ortiz@kapstonepaper.com>; Patrick Loupin <PatrickLoupin@PackagingCorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@Ralphsaperstein com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Sandi Swarthout <sswarthout@capconn.net>; Sarah Schack <sschack@timberproducts com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <Scott.R.Hawley@tsocorp.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steve Wood <S.Wood@resolutefp.com>; Steven Castracane <steven.castracane@linde.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tony Hardenbrook; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; William McMahon <william.mcmahon@ipaper.com>; Bill Gilmore <billmg@penwool com>; Chad Stokes <cstokes@cablehuston.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Ed Coghlan <Ed.coghlan@onsemi.com>; Ed Finklea <efinklea@awec solutions>; Jake Evans <Jake.evans@onsemi.com>; Jared Sommer <sommerj@byui.edu>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kyle Williams <williamsk@byui.edu>; Nancy Holbrook <Nancy Holbrook@bp.com>; Nick Avenetti <nick@perlite.com>; Phil Foss <phil.foss@onsemi.com>; Rick Stricker <rstricker@baf.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Steve O'Brien <sobrien@baf com>; Tommy Brooks <tbrooks@cablehuston.com>; Tony Hardenbrook; Tyler C. Pepple <tcp@dvclaw.com>; Chuck Gates [redacted]; Nancy Richardson <Nancy.Holbrook@bp.com>; Robert Pierce <robert.pierce@shell.com>; Rusty Williams <williwk@bp.com>

Subject: AWEC Energy Brief

This energy brief is provided by Energy Strategies

on behalf of the Alliance of Western Energy Consumers.

http://www.awec.solutions

With Gov. and House Supermajority, Oregon Dems Tee Up Cap and Trade, Steve Ernst – Clearing Up

The prospects of Oregon passing a cap-and-trade bill in the

upcoming legislative session grew much brighter after Democrats kept control of the Governor's desk and gained a supermajority in the Legislature in the Nov. 6 election.

Gov. Kate Brown beat back Republican challenger Rep. Knute Buehler to win four more years in Oregon's highest office. And she'll have a supermajority behind her in the House.

Democrats picked up three seats in the House, defeating Republican incumbents, and now hold 38 of the 60 seats in the house. The pa1ty also gained at least one seat in the Senate, giving them 18 seats in the Senate, and a supermajority in the Legislature.

Democrats promised at the conclusion of 2018 session that a carbon emissions bill would be the top legislative priority in 2019, and they likely won't waste time keeping that promise.

"I assume a cap-and-trade bill be introduced right out the gate," an Oregon lobbyist, who asked not to be identified, told *Clearing Up.* "The first day it will get a hearing and on the third day they'll move it out for a vote. It's going to move fairly briskly."

Cap-and-trade bills have been debated in the Oregon Legislature since 2015.

A pair of "cap-and-invest" bills were proposed in last year's mini session, but the short session proved to be too much for climate and clean energy activists to overcome, and both bills died in committee when the clock ran out on the Oregon Legislature.

Senate Bill 1507 and House Bill 4001 both called for creating a cap-and-trade program that would have included companies that emit more than 25,000 metric tons per year of carbon.

Under the bills, the Oregon Environmental Quality Commission would set a cap on total emissions statewide in 2021. Roughly 100 companies in the state would have had to buy allowances annually to cover their emissions. Revenue from the allowance auctions would be invested in clean-energy programs that reduce or mitigate emissions.

In addition, emissions would have dropped 20 percent from 1990 levels by 2025, 45 percent from 1990 levels by 2035, and 80 percent below 1990 levels by 2050. The bills would have likely linked Oregon with California and several Canadian provinces in an emissions trading market, managed by Western Climate Initiative.

Portland General Electric, PacifiCorp and a gaggle of business groups oppose a statewide cap-and-trade scheme. Utilities worry that any new emissions bill will not account for the work they have already done to reduce emissions, most notably the "Clean Electricity, Coal Transition" legislation which eliminates the cost of imported coal-fired generation from Oregon rates in 2030 and increases the state's RPS to 50 percent by 2040.

In addition to a cap-and-trade bill, the Legislature is also expected to take up debate over community choice aggregation (CCA), which would allow communities and cities to join together to acquire their own energy resources.

In other election news, Portland voters passed Measure 26-201, known as the Portland Clean Energy Community Benefit Initiative.

Starting Jan. 1 2019, retail companies making more than $1 billion in gross revenues nationally and $500,000 in the city will be assessed a 1 percent tax by the city.

Money from the tax will be used to pay for clean energy projects and job training throughout the city.

Proponents say the initiative will generate an estimated $30 million annually.

Tariff Settlement Would Lower BPA Transmission Rate in FY 2020-2021, Rick Adair – Clearing Up

BPA is proposing a 4-percent average transmission rate increase, contingent on stakeholder acceptance of a tariff settlement by Nov. 30, Administrator Elliot Mainzer said Nov. 7 during the end-of-fiscal-year quarterly business review.

The initial proposal set the rate increase at 9.5 percent, but Bonneville has delayed releasing that until early December to give stakeholders time to study the settlement.

It also cancelled a Nov. 8 scheduling conference and Nov. 15 prehearing conferences for the BP-20 rate case and the TC-20 terms and conditions proceeding.

"We thought it might have been a 9.5 percent increase, but a few things have gone our way recently," Mainzer said.

BPA hasn't yet released its proposed power rate increase, but did lay out the drivers of "upward rate pressure" and how they were beat down from an initial $216 million to a $75 million residual, most of it energy efficiency expense.

The biggest bite from the initial amount was $65 million, due to debt management actions, principally through the Regional Cooperation Debt (RCD) program. Under this program, Bonneville accelerates payment of its Treasury debt using savings gained by refinancing Energy Northwest debt. Mainzer said ENW recently agreed to extend the RCD program for up to 10 years, guaranteeing it would remain in BPA's tool kit as it works to enhance its fiscal health.

He also said BPA would be taking on a bit more variable-interest rate debt, "although that is not without risk."

Other factors exerting upward rate pressure include losing 30 MW of load, the flattening of loads, lower priority-firm sales, and lower alternative sales. "Tough" market conditions for secondary power sales were also an issue, Mainzer said.

In setting the stage for the BP-20 rate period-fiscal years 2020 and 2021-BPA has made great strides in "bending the cost curve" downward during FY 2018 through cost reductions and efficiencies, he said.

As noted in the integrated program review close-out report released last month (CU No. 1873 [13]), Bonneville's final projected program costs for the BP-20 rate period are $66 million lower per year compared to the current FY 2018-2019 rate period, over and above the additional $77 million of inflation that was absorbed.

The result was that average annual program costs that increased by 3 percent in the last two rate periods, have decreased by 4 percent at the start of the BP-20 rate period. But, he added, "We can't cost-manage our way to fiscal health; we have to find new business."

As an example of this, Mainzer pointed to the five-year, 200 MW contract entered in March with Portland General Electric as an example of new business (CU No. 1841 [14]), a deal that will help PGE meet a projected shortfall when the 561 MW Boardman coal plant shutters in 2020.

This meshes with BPA ' s grid modernization effort that will, among other things enhance the agency's automatic generation control capability, which will facilitate additional capacity marketing from

the hydro system.

In her finance update, CFO Michelle Manary said agency net revenues for BPA at the end of FY 2018 were $444 million higher than expected. This stemmed from expenses that were $387 million lower than forecast, and revenues that where $57 million higher.

Power Services ended the fiscal year with $52 million less in expenses (aside from RCD contributions) and $35 million more in revenues than forecast, and Transmission Services had $19 million less in expenses and $38 million more in revenues.

Bonneville's debt-to-asset ratio-a key metric for monitoring its financial health-was 90 percent at the end of FY 2017, and has been reduced to 88 percent a year later. Manary noted that Moody's top-50 utility average is 54 percent.

"We're going to need to continue to be disciplined," she said.

Siskiyou County Asks FERC to Deny Klamath Dam Removal, K.C. Mehaffey – Clearing Up

Siskiyou County, Calif., says a plan to remove four dams in the Klamath River underestimates the costs and risks, has an unrealistic time schedule, and "substantively fails to address many critical aspects of the project."

In a comment filed on Nov. 2, an attorney representing the county asks FERC to deny the application to transfer the license for the four projects from PacifiCorp to the Klamath River Renewal Corp. (KRRC); three of the hydroelectric projects are in Siskiyou County.

The comment states that KRRC's Definite Plan for removing the dams "is fatally flawed, and does not support a conclusion that KRRC will be able to undertake the project as proposed."

It says that KRRC's proposed schedule-to draw down the reservoirs on Jan. 1, 2021, to begin removal-doesn't take into account the lengthy environmental permitting requirements, from ESA consultation and a National Environmental Policy Act review, to a Clean Water Act permit.

The short timeframe is one of the most significant flaws of the plan, the county claims, and "appears to be driven by KRRC's desire to make the cost of the Project…fit within KRRC's budget."

The county also says that $450 million earmarked for dam removal and restoration is insufficient. Under KRRC's analysis, the project is likely to cost about $397.7 million; a "most probable low estimate," is $346.5 million, and a "most probable high estimate" is $507.1 million-$57 million more than the funding available from PacifiCorp customers and the California Legislature.

The county says that if the project is delayed by three to six years, the cost of the project can be expected to increase by $50 million to $100 million or more, but the plan includes no funding for delays.

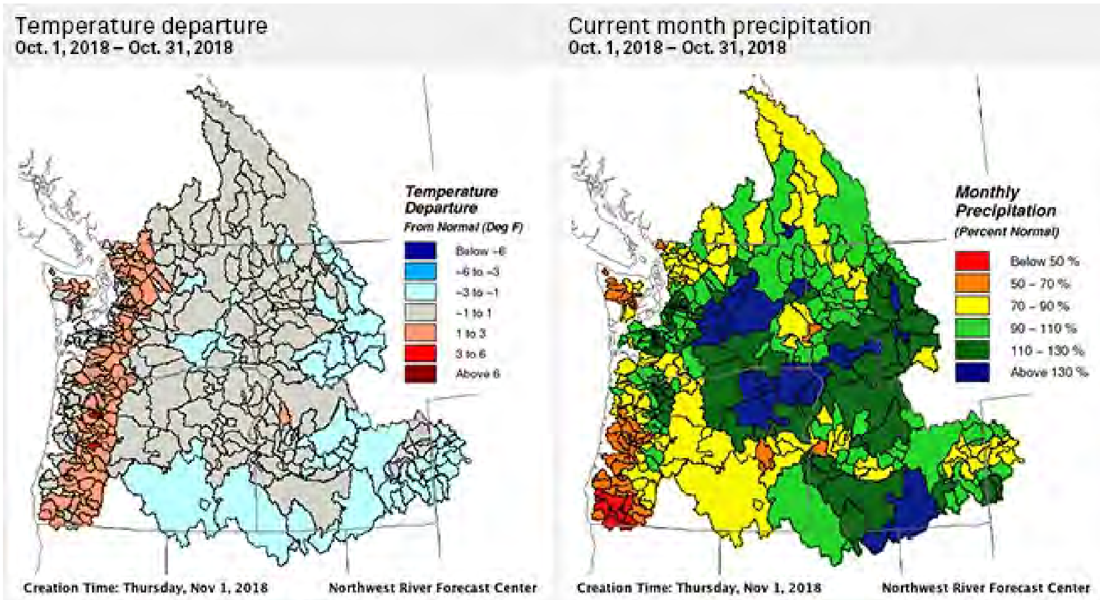
Siskiyou County also argues that the plan does not attribute costs to several risks, and does not provide adequate funding to compensate landowners for lost property values or the county for lost revenue from decreases in property values and taxes.

The comment details many other components the county says are inadequately addressed, including aquatic and terrestrial resources and plans for road improvements, Yreka's water supply, downstream flood control, closing two fish hatcheries, water quality monitoring, groundwater well monitoring and fire and traffic management.

Northwest hydro facilities kick off new water year with below-average generation, Anna Duquiatan - SNL

Hydropower generation in the Pacific Northwest at the start of the 2019 water year in October was almost at par with the prior-year level but lower than the 10-year average, as near to below-normal temperatures and varied precipitation trends were observed.

Temperatures were near normal to as much as three degrees Fahrenheit below normal across the bulk of the Northwest in October, while precipitation ranged from 70% of normal to as much as 130% above average, according to the U.S. National Oceanic and Atmospheric Administration.



Source: National Oceanic and Atmospheric Administration

Data from the U.S. Army Corps of Engineers show that total net generation at 23 hydroelectric plants across the Pacific Northwest was 0.5% higher than the year-ago level but 7.6% below the 10-year average as it reached 3.87 million MWh. That figure is down 3.3% from September.

Year-to-date hydropower production through October totaled 66.89 million MWh, down 2.4% versus the year-ago level but up 6.5% from the 10-year average for the period.

In the upper Columbia River Basin, the Grand Coulee Dam, the largest of the region, generated 1.14 million MWh, up 12.6% versus the year-ago month but down 3.2% versus the 10-year average for the period. The Chief Joseph Dam generated 612,398 MWh, up 11.4% versus October 2017 but down 3.2% versus the 10-year average for the month.

October flows in the lower Columbia River Basin were lower versus the year-ago period. Located on the Washington-Oregon border, the BonnevilleDam produced 301,985 MWh, down 6.1% versus October 2017 and 11.4% lower versus the 10-year average for the month. The Dalles Dam, 50 miles downstream, produced 378,779 MWh, down 0.9% from the year-ago month and down 8.3% from the last quarter.

NorthWestern Energy to join western US energy imbalance market, Jeff Stanfield - SNL

NorthWestern Corp. will begin participating in the California ISO's energy imbalance market in April 2021, the company said Nov. 8.

The utility company, which does business as NorthWestern Energy in Montana, South Dakota and Nebraska, and serves more than

718,000 customers in those states, will join seven other utilities outside of California and Canada's Powerex Corp. that have previously become Energy Imbalance Market participants.

The market, known as the EIM and first launched by ISO and PacifiCorp in 2014, currently has eight members. Several others are scheduled to join before NorthWestern does, including the Balancing Authority Of Northern California and Sacramento Municipal Utility District in April 2019 and the Los Angeles Department of Water and Power, Salt River Project and Seattle City Light will follow in April 2020.

The EIM is a real-time, wholesale power market that enables participants to buy low-cost energy anywhere in Arizona, California, Idaho, Oregon, Nevada, Utah, Washington and Wyoming.

By pooling resources across those states, participants are able to access low-cost renewable energy in real time, offset power from fossil-fueled plants and reduce the collective need for real-time flexible reserves, the ISO said.

"The EIM will allow NorthWestern to make better use of our transmission and electric generation resources," NorthWestern CEO Bob Rowe said in a news release. "Expanding our use of the regional electric grid through the EIM will help integrate variable renewable energy. We have seen significant growth in wind generation in Montana, which highlights the need to have access to other generation resources that are available on demand, 24/7. Being part of EIM will help with that need."

Since the EIM began operation in November 2014, the imbalance market has produced more than $502 million in benefits, the grid operator said. NorthWestern's portfolio includes 11 hydroelectric dams and two wind farms.

US Senate bill could be 'key derisking element' in nuclear power development, Molly Christian – SNL

A bipartisan U.S. Senate bill's call to lengthen potential power purchase agreements between utilities and the federal government could be key to facilitating advanced reactor development, industry sources said Nov. 13.

The Nuclear Energy Leadership Act, or NELA, outlines a strategy for boosting nuclear energy innovation and deploying advanced reactors as a means of re-establishing U.S. leadership in that area. The legislation, S.B. 3422, was introduced in early September by a bipartisan group of U.S. senators led by Lisa Murkowski, R-Alaska, and Cory Booker, D-N.J.

The bill calls on the federal government to partner with leading research institutions and the private sector to develop new nuclear technologies. One part of the bill would extend from a maximum of 10 years to up to 40 years the length of power purchase contracts that federal agencies can sign with utilities to meet the government's energy needs. The legislation also directs the U.S. Department of Energy to create a long-term nuclear power purchase agreement pilot program with the goal of supporting first-of-its-kind or early deployment nuclear technologies.

The lengthier maximum federal power purchase agreements could be crucial to developers of new nuclear projects, which can take over 10 years to pay off their initial capital costs, industry members said.

"It's important to have that ability for the federal government to do that," NuScale Power LLC Chief Strategy Officer Christopher Colbert said at a Nov. 13 event on NELA in Washington, D.C. The

event was hosted by the ClearPath Foundation, U.S. Nuclear Industry Council, Nuclear Innovation Alliance, ThirdWay and the Atlantic Council.

NuScale is working on an up-to-600-MW small modular reactor project at the DOE's Idaho National Laboratory. Public utility Utah Associated Municipal Power Systems will own the plant, but Colbert said the ability of the DOE and other federal agencies to buy a portion of the facility's output is "a key derisking element as they look at [the plant] going forward."

Other speakers agreed. Anne Leidich, a senior associate at Pillsbury Law, said her energy clients "were very excited" about NELA's 40-year power purchase provision and called it "a great step," given that costs for new nuclear projects are not recoverable in just 10 years.

In an interview following the Nov. 13 panel, ClearPath Executive Director Rich Powell said he expects NELA to have broad bipartisan support in the new Congress beginning in 2019. But the legislation has yet to come up for a vote in the Senate. The U.S. House of Representatives has not introduced a companion bill, although House lawmakers have proposed separate bills that mirror certain provisions of NELA, Powell said.

The push to support advanced nuclear energy development comes as older, existing plants struggle to compete against rising natural gas-fired generation and new renewable capacity. Those market dynamics have compelled the Trump administration and nuclear plant owners to pursue federal policies to aid financially troubled units.

But the White House is said to have shelved recent DOE recommendations to support nuclear plants on national defense and security grounds, and the Federal Energy Regulatory Commission rejected a September 2017 proposal from Energy Secretary Rick Perry aimed at ensuring full cost recovery for certain nuclear plants in wholesale markets.

US power grid operators ponder future as state policies impact markets**, Andrew Coffman Smith - SNL**

State actions to cut greenhouse gas emissions by favoring renewables and other "clean energy" sources have power grid operators in the United States re-evaluating their roles, stakeholder processes and relationships with states.

Officials with the nation's regional transmission organizations and independent system operators attempted to address those existential issues at a Nov. 13 discussion at the National Association of Regulatory Utility Commissioners' 2018 annual meeting in Orlando, Fla.

Andrew Ott, president and CEO of the PJM Interconnection, said RTOs and ISOs must strike a balance between maintaining "some competitiveness and integrity" in electricity markets in order to incentivize investments and new generation and ensuring that states' policy interests, including their climate goals, are "respected."

PJM, which oversees America's largest wholesale electricity market, currently is following up a June 29 order by the Federal Energy Regulatory Commission to modify its capacity market design and halt price-suppression caused by out-of-market state subsidies. At risk is the future of merchant generation sources, both existing and new, that are failing to cover costs as a result of state policies paying out-of-market revenues to or otherwise favoring

certain generation sources, often through renewable portfolio standards.

The ISO New England likewise has been working to reform its capacity auction process to accommodate state-sponsored resources while ensuring that competitive generation sources, which are needed for grid reliability, do not retire as a result of prices being suppressed to historical lows by subsidies and cheap natural gas supplies.

"We cannot have competition where there is no confidence in the market to be competitive," Ott said. Otherwise, he said, the "Plan B" option is to return to something akin to competitive procurements, which amounts almost to "a synthetic re-regulation at a regional level."

Carbon pricing, stakeholders and state influence

While Ott acknowledged that PJM's flawed capacity market design remains a "rough point" of contention among the RTO, states and stakeholders, the PJM chief notably appeared receptive to potentially implementing a carbon price on emissions in the PJM market at some point. Further, he acknowledged the existence of a "pretty universal" and significant push to decarbonize the electricity sector but lamented that the issue is "very political."

Nevertheless, Ott said PJM does not want to be a policy-setter with respect to carbon pricing but still could go forward with studying how greenhouse gas emissions could be internalized in future markets.

The ISO-NE seems to be even more open to the idea, but only if states are on board. Carbon pricing "in our mind would be the most efficient way to produce the outcomes that states are looking for through a competitive wholesale market," said Anne George, vice president of external affairs for the ISO-NE.

However, the New England states have yet to show any enthusiasm for the grid operator to pursue carbon pricing, according to George, who attributed that to a fear of ceding authority to the ISO-NE or FERC. "We're not going to pursue [a policy] if we don't have the support of the states behind us," George said.

Clair Moeller, president and COO of the Midcontinent ISO, said, "We're policy-takers, not policy-makers." Instead, Moeller said MISO must perform a balancing act in overseeing a stakeholder process that considers all sides.

"It isn't up to us to pick between the generation owners and the states," Moeller said. "It is up to us to decide 'this is the path forward that is in [the public's interest].'"

However, Ott cautioned that achieving a perfect stakeholder process, which favors all sides, is impossible.

As for the relationship between the grid operators and the states, Ott said the future of capacity markets boils down to regional efforts to ensure resource adequacy. He also suggested that PJM would be open to making adjustments to its stakeholder process if states want to have more say on capacity market design.

In contrast to the ISO-NE and PJM, Moeller noted, the responsibility for achieving resource adequacy within MISO's territory rests with load-serving entities, with oversight by states.

"So the current fact that the capacity costs mostly stay with the state saves us from all of those debates," said Moeller. But, he emphasized, that does not spare MISO from having to deal with "serious problems" with respect to resource adequacy and cost-shifting in the future as a result of plant retirements and higher renewable penetration levels. He also said the 17 states in MISO's

footprint fail to see that crisis coming.

For the ISO-NE, George said states "definitely weigh-in in the process, and we know exactly where Massachusetts is standing on particular issues." Still, she stressed that the grid operator gives no preference to one state over another.

However, George said some states — such as Massachusetts, with its "huge" ongoing procurements of hydropower imports, offshore wind and other renewables — do have a bigger impact than others when they take action. If current trends continue, a recent study commissioned by the New England Power Generators Association warned that state-sponsored resources could exceed 50% of New England's consumer electricity supply by 2027.

George said such continued growth of state-sponsored and financially supported generation is not sustainable for New England, yet she believes states will continue to set their climate goals and renewable mandates in the pursuit of decarbonization. While the ISO-NE accordingly might have to find another way to achieve resource adequacy, she said, "for now ... we're not rushing into the panic room."

US EPA revives Bush-era interpretation of Clean Air Act permitting program, **Zack Hale - SNL**

The U.S. Environmental Protection Agency has restored a Bush-era interpretation of a Clean Air Act program for fossil fuel-fired power plants and other major emissions sources that has been stayed for nearly a decade.

The change represents the latest in a series of moves the Trump administration has made to ease permitting requirements under the New Source Review, or NSR, program. That program is designed to ensure that industrial facilities install state-of-the-art pollution controls when they undertake upgrades that are projected to significantly increase emissions of regulated pollutants.

According to the EPA, the Nov. 7 action will clarify the "project aggregation" facet of the highly technical permitting program, which "will greatly improve regulatory certainty and remove unnecessary obstacles to projects aiming to improve the reliability, efficiency, and safety of facilities while maintaining air quality standards."

"Project aggregation" refers to an assessment by owners and permitting authorities that multiple related physical or operational changes to a facility should be considered a single "project" for NSR applicability.

The EPA said the move affirms the interpretation of the NSR program set forth in January 2009 in the final days of the George W. Bush administration.

The 2009 action did not amend any regulatory text but instead explained that the EPA's interpretation of the Clean Air Act statute was that physical and/or operational changes should be combined into a single project for NSR consideration when those changes are "substantially related."

At that time, the EPA explained that physical or operational changes should be grouped together for NSR permitting purposes when the modifications are "technically or economically" interdependent. The EPA also said it would apply a policy of presuming that changes separated by three or more years are not substantially related unless the specifics of the activities rebut that presumption.

In response, the Natural Resources Defense Council, or NRDC, on Jan. 30, 2009, filed a petition for administrative review in the U.S.

Court of Appeals for the District of Columbia Circuit, arguing that the action would allow sources to evade NSR requirements for activities that plainly should trigger the need to install modern pollution controls. The group specifically argued that the action failed to adequately define "technical dependence" or "economic dependence," leaving greater uncertainty than the previous policy. That uncertainty created a new loophole that invited facilities to escape NSR by "disaggregating" related projects, thereby causing emissions to increase, the NRDC asserted.

On Feb. 13, 2009, the Obama EPA announced it would reconsider the action and asked for comments responding to the points raised by the NRDC. The Utility Air Regulatory Group, a trade organization representing dozens of power utilities and related companies, responded that the Bush EPA's "substantially related" interpretation is clear and supported by case law. However, the Obama EPA eventually decided to stay the action indefinitely.

John Walke, the director of clean air at the NRDC who filed the group's lawsuit in 2009, said in a Nov. 7 email that he does not expect the changes to have a major impact on existing power plants. "I don't see the 'project aggregation' rollbacks having great significance for the utility sector, due to the fewer numbers of emissions units at power plants, units that are not integrated in inter-related projects and process lines the way other industries are," Walke said, referring to chemical plants, oil refineries and other industrial enterprises.

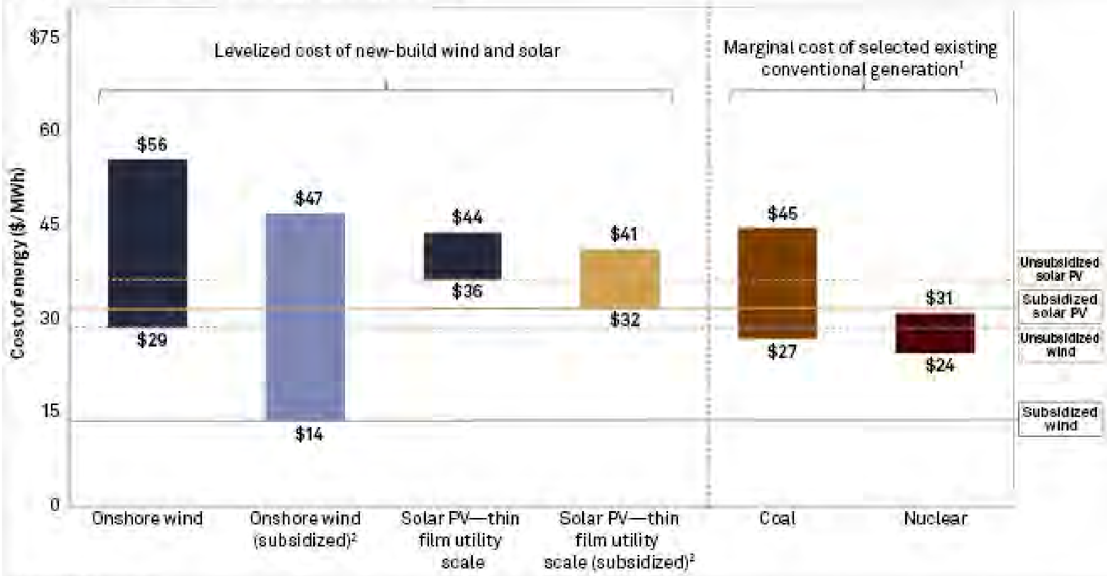
But Walke said the NRDC will be discussing potentially reactivating the D.C. Circuit case — *Natural Resources Defense Council v. EPA*; No. 09-1065 — and possibly filing a petition for review challenging the Nov. 7 EPA action.

Renewables are cost-competitive with conventional generation, Lazard finds, **Richard Martin - SNL**

The levelized cost of energy from renewable sources continues to decline, and in many cases is now at or below the marginal cost of conventional power generation, according to Lazard's latest levelized cost of energy analysis. To keep the power grid supplied 24 hours per day, however, still requires a mix of conventional and alternative energy sources.

"While alternative energy is increasingly cost-competitive and storage technology holds great promise, alternative energy systems alone will not be capable of meeting the baseload generation needs of a developed economy for the foreseeable future," the company said in a Nov. 8 press release. "Therefore, the optimal solution for many regions of the world is to use complementary conventional and alternative energy resources in a diversified generation fleet."

Levelized cost of energy comparison



As of Nov. 8, 2018.

[1] Represents the marginal cost of operating, fully depreciated coal and nuclear facilities, inclusive of decommissioning costs for nuclear facilities. Analysis assumes that the salvage value for a decommissioned coal plant is equivalent to the decommissioning and site restoration costs. Inputs are derived from a benchmark of operating, fully depreciated coal and nuclear assets across the U.S. Capacity factors, fuel, variable and fixed operating expenses are based on upper and lower quartile estimates derived from Lazard's research.

[2] The subsidized analysis includes sensitivities related to the federal tax overhaul and U.S. federal tax subsidies.

Source: Lazard

In practice, at least for now, a diversified generation fleet means one that relies largely on natural gas plants, either as the primary source of baseload power or as backup and supplemental power for times when the sun is not shining and the wind is not blowing. "We find that Alternative Energy technologies are complementary to conventional generation technologies," the study concluded, "and believe that their use will be increasingly prevalent for a variety of reasons, including environmental and social consequences of various conventional generation technologies, [renewable portfolio standard] requirements, carbon regulations, continually improving economics as underlying technologies improve and production volumes increase and government subsidies in certain regions."

Accelerating the spread of alternative energy is the declining cost of energy storage, which Lazard covered in a separate study released simultaneously with the LCOE report. That study found that economies of scale, improved standardization, technological improvements and increased renewables penetration will continue to drive down the cost of energy storage — as much 28% for lithium-ion technologies over the next five years.

"Without very cheap energy storage, which Lazard's LCOS study shows us we don't have yet, we will need firm generation to keep grids stable, and natural gas looks posed to fill that need," said Joshua Rhodes, a research associate at the University of Texas at Austin's Energy Institute, which released a white paper on LCOE in October that reached similar conclusions to the Lazard study. "That said, there is still a lot of room left in most grids to increase their renewable generation levels before they run into those types of problems."

The unsubsidized levelized cost of energy from utility-scale solar PV now ranges from $36/MWh to $44/MWh, down 13% from 2017, the study found. LCOE for onshore wind has declined nearly 7% in the last year, to a range of $29/MWh to $56/MWh. The cost declines for renewables continue to be dramatic; "however, over the past several years the rate of such LCOE declines have started to flatten," according to the study.

DOE moves forward with plans to fund research in 'coal plants of the future', Taylor Kuykendall - SNL

U.S. Department of Energy officials are moving forward with plans to encourage the development of "coal plants of the future" with three competitively funded research and development efforts that could result in the design, construction and operation of a coal-based pilot-scale power plant.

The DOE will fund the research projects in fiscal year 2019 through an effort it is calling Coal FIRST, which stands for the qualities it is seeking in the design of future coal plants: "flexible, innovative, resilient, small and transformative."

The agency previously announced it was interested in what it would take to build small, modular and highly efficient coal power plants and in May requested industry comment on the potential for coal plants that could generate "secure, stable and reliable power" more efficiently than today's conventional utility-scale coal power plants.

The existing fleet of coal-fired power plants are no longer the fuel of choice for power producers due in large part to sustained low natural gas prices, decreasing capital costs for building competing electricity generating operations and more frequent dispatch as load-following units, the DOE said in its announcement.

"Changes to the U.S. electricity industry are forcing a paradigm shift in how the nation's generating assets are operated," the DOE wrote in its announcement. "Coal-fired power plants optimized as baseload resources are being increasingly relied on as load-following resources to support electricity generated from intermittent renewable capacity, as well as to provide critical ancillary services to the grid."

The DOE says it envisions a future fleet of coal plants with overall plant efficiency of 40% or greater higher heating value at full load, between 50 MW and 350 MW of capacity, near-zero emissions, capable of high ramp rates, and other qualities that could encourage the proliferation of new coal-fired power plants in today's market.

The department is expected to announce a funding opportunity for cost-shared research and development projects focused on steam turbines that can be integrated into such plants in the second quarter of fiscal year 2019. A separate funding opportunity is expected in the third quarter of fiscal year 2019 that will address research and development of critical components and other "advanced approaches" needed to support a future coal plant.

While several experts have said they are skeptical about the potential for such technologies, coal companies such as Murray Energy Corp. have said they support the effort. An executive with a subsidiary of American Electric Power Co. Inc. said at a May industry conference that while there is some utility interest in such small modular coal plants, it would take several engineering breakthroughs to deploy those technologies.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Kelly Francone <kfrancone@energystrat com>

Sent time: 11/08/2018 09:45:28 AM

To: Aldis Raisters@gapac com; Hugh O Pierce@tsocorp com; kwilson@legadv com; Martha_C@columbiasteel com; marycatherine mcaleer@weyerhaeuser com; mruckwardt@schn com; Noel Mak@ATImetals com; Samuel Liebelt@kapstonepaper com; todd wiseman@solvay com; tom@richlandpaper com; Alicia Fuentes <Alicia Fuentes@solvay com>; Alicia Givens <agivens@pacounsel org>; Ben Byman <Ben Byman@lvpnp com>; Bernie McNamee <bmcnamee@timberproducts com>; Bill Castleberry <Bill Castleberry@emeraldmaterials com>; Bill Smith <Bill Smith@airliquide com>; Boz <vanhoutb@ohsu edu>; Brad Beavers <bbeavers@timberproducts com>; Brad Troup <Brad L Troup@tsocorp com>; Bradley Mullins <brmullins@mwanalytics com>; Brian Wood <brian wood@NipponDynawave com>; Briane Keene <BrianR Keene@airliquide com>; Bruce Martin <bruce martin@westrock com>; Bruce Wittmann <WittmannConsultingLLC@outlook com>; Calli Daly <calli daly@kochps com>; Calvin Greene <[redacted]; Chad Sorber <sorber@ohsu edu>; Charley Hathaway <charley hathaway@nwpsllc com>; Chris Horn <chris_h@columbiasteel com>; Clifford Barr <Clifford G Barr@tsocorp com>; Craig Anneberg <Craig anneberg@norpacpaper com>; Cynthia Leon <cynthia leon@ipaper com>; Dan Coyne <dancoyne@coynenet com>; Dan Riley <daniel t riley@tsocorp com>; Dave Post <Dave Post@wahchang com>; David Barge <David A Barge@tsocorp com>; David Clemens <David Clemens@darigold com>; David Elliot <davidelliott@boisebuilding com>; David Mitcheltree <DBM@EESconsulting com>; David Tobin <DavidTobin@BoisePaper com>; Delee Shoemaker <delees@microsoft com>; Dennis <Dennis Draleau@recsilicon com>; Don Hendricksen <donald j hendrickson@boeing com>; Don Sturtevant <Don Sturtevant@simplot com>; Donna Gehlhaart <Donna Gehlhaart@ipaper com>; Doug Krapas <dougkrapas@iepco com>; Drew Bryck <drew m bryck@boeing com>; Drew Gilpin <drew gilpin@evrazna com>; Ed Finklea <efinklea@awec solutions>; Eric Fuller <efuller@precastcorp com>; Eric Streicher <Eric Streicher@Airgas com>; Ernesto M Negrete <Ernesto M NegretePapadakis@tsocorp com>; Fawn Barrie <fbarrie@legadv com>; Gary Collison <GCollison@pccstructurals com>; Graham Bailey <graham bailey@NipponDynawave com>; Greg Miller <greg miller@weyerhaeuser com>; Greg Vaughn <greg vaughn@resolutefp com>; Irene Plenefisch (LCA) <irenep@microsoft com>; JaDPrice <JaDPrice@gapac com>; Janese Pearson <Janese Pierson@ipaper com>; Jeff Johnson <Jeff Johnson@recsilicon com>; Jenifer Suffridge <jenifer suffridge@shell com>; Jennifer <jenny@pacounsel org>; Jennifer Hackett <Jena Hackett@ipaper com>; Jim Stanton <jstanton@microsoft com>; JL Wilson <jlwilson@pacounsel org>; John Bob <John Bob@am dynonobel com>; John Carr <jcarr@awec solutions>; John Domingo <jdomingo@pccstructurals com>; John Latimer <john latimer@shell com>; Josh Weber <jdw@dvclaw com>; Justen Rainey <JustenR@pacounsel org>; Karen Vaughn <Karen Vaughn@gapac com>; Keith Warner <keith c warner@boeing com>; Ken Dey <ken dey@simplot com>; Ken Johnson <ken johnson@recsilicon com>; Kenneth Li <kenneth Li@gapac com>; Kevin Davis <kevin_davis@iepco com>; Kevin Rasler <kevin_rasler@iepco com>; Khaly Niang <Khaly Niang@airliquide com>; Larry Voos <larry voos@norpacpaper com>; Laura Jane Schaefer <schaefel@ohsu edu>; Leslie Adams <adamsla@airproducts com>; Luke Hart <Luke Hart@axiall com>; Marcie Peters <marcie peters@solvay com>; Mark Dunn <mark dunn@simplot com>; Mark Nelson <pacounsel@pacounsel org>; Mark Roeter <Mark_R@columbiasteel com>; Mark Steele <steele@norpac com>; Marty Sedler <marty sedler@intel com>; Matt Ruckwardt <mruckwardt@schn com>; Matt Upmeyer <matt upmeyer@lambweston com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick Houser@ipaper com>; Michael Broughton <michael l broughton@boeing com>; Michael Culver <michael culver@ipaper com>; Michael Kuhn <MKuhn@RockTenn com>; Michael Kuhn <mkuhn@RockTenn com>; Michael Padgett <Michael Padgett@alcoa com>; Michael Slattery <Michael Slattery@evrazna com>; Mike Hale <Michael Hale@simplot com>; Mitch Maynard <mmaynard@DeltaEnergyllc com>; Nick Kaiser <Nick Kaiser@NipponDynawave com>; Public Affairs Counsel <pac@pacounsel org>; Pat Ealy <pat ealy@akzonobel com>; Pat Lydon <PLydon@LHS org>; Pat Ortiz <Patrick Ortiz@kapstonepaper com>; Patrick Loupin <PatrickLoupin@PackagingCorp com>; Phil Zirngibl <Pzirngi@gapac com>; Ralph Saperstein <Ralph@Ralphsaperstein com>; Randy Clancy <clancyrb@airproducts com>; Raymond L Beard <BEARDRL@airproducts com>; Richard White <richard a white7@boeing com>; Rob Buckingham <rob buckingham@norpacpaper com>; Rob Freres <rtfreres@frereslumber com>; Ron Johnson <Ron Johnson@airliquide com>; Ryan Beaver <Ryan Beaver@weyerhaeuser com>; Ryan Spiller <Ryan@capconn net>; Samantha Julian <Samanthaj@pacounsel org>; Sandi Swarthout <sswarthout@capconn net>; Sarah Schack <sschack@timberproducts com>; Scott Gutting <sgutting@energystrat com>; Scott Hawley <Scott R Hawley@tsocorp com>; Scott Wagener <Scott Wagener@spfibertech com>; Skylar <Skyler Mlasko@northwesthardwoods com>; Spiro E Xenos <spiro e xenos@boeing com>; Stan Jackson <S Jackson@shell com>; Steve Wood <S Wood@resolutefp com>; Steven Castracane <steven castracane@linde com>; Tim Boyd <[redacted]; Tim Root <timothy root@axiall com>; Tom Rouleau <Tom Rouleau@darigold com>; Tony Hardenbrook; Trudy Slagle <trudy slagle@lambweston com>; Tyler C Pepple <tcp@dvclaw com>; Tyne Brownlow <tyne brownlow@ipaper com>; Wes Hill <Wes Hill@gapac com>; William McMahon <william mcmahon@ipaper com>; Jeff Burks <jburks@energystrat com>; Jeff Fishman <jfishman@energystrat com>; Keegan Moyer <kmoyer@energystrat com>

Subject: AWEC Electric Energy Brief

AWEC ELECTRIC ENERGY BRIEF

You are receiving this energy brief provided by Energy Strategies because you are a contributing electricity member of AWEC

Wash. voters reject what would have been nation's 1st carbon tax, Amanda Luhavalja - SNL

Washington state voters on Nov. 6 rejected a ballot initiative that would have been the first direct tax on carbon in the country. The initiative was rejected 56.3% to 43.7%, according to the Washington secretary of state.

Unlike a cap-and-trade system, which imposes penalties on companies if they exceed an emissions limit set by regulators and creates a market for companies to buy and sell allowances to emit a certain amount, Initiative 1631, or I-1631, would have placed a direct tax on the carbon released by power plants and refineries.

Supported by Gov. Jay Inslee, a Democrat, and various environmental groups, I-1631 would have levied a $15-per-ton fee starting in 2020.

Energy companies Andeavor, BP PLC, Chevron Corp. and Phillips 66 lined up against I-1631, collectively spending millions of dollars on the "No on 1631" campaign sponsored by the Western States Petroleum Association.

Calling the initiative flawed and poorly written, the oil companies were concerned that if I-1631 were passed, it could be a precedent for other states, potentially creating a patchwork of systems and fees.

"This is a clear victory for working families, consumers, small businesses and family farmers across our state — as well as for our environment," spokesperson for "No on 1631" Dana Bieber said in a Nov. 6 news release. "Washington voters have soundly defeated this costly, unfair and ineffective energy tax."

In 2016, Washington voters rejected a similar ballot proposal that would have taxed the use of certain fossil fuels and fossil fuel-generated electricity. Earlier this year, a bill to establish a carbon tax was narrowly defeated in the Washington legislature.

Hydro One expects Avista merger to dent profits as delays hike costs, Gene Laverty - SNL

Hydro One Ltd. said its US$5.3 billion acquisition of Avista Corp. will take a bite out of profits once it is completed as delays and financing costs have pushed the deal's closing into March 2019.

The immediate impact of the transaction will be "low single-digit dilutive," Hydro One CEO Paul Dobson said on a Nov. 8 conference call. Dobson, along with other senior executives at the Ontario government-controlled utility, is working on an interim basis after recently elected Premier Doug Ford had its board and top management replaced. Increased financing expenses, combined with cuts to the Toronto-headquartered company's credit ratings, have h ked the cost of the merger which had originally been expected to boost profit immediately. The closing of the deal has been stretched by about six months.

"There have been no increasing merger commitments on the financial side," CFO Chris Lopez, who also holds his position on an interim basis, said on the call. "Any of the concerns in the U.S. have been on the governance side, with no additional financial commitment. So this is purely related to the increasing cost of financing."

Ford was elected premier of Canada's most-populous province in June on a platform that included plans to cut electricity rates. His campaign targeted executive salaries and benefits at Hydro One, particularly those of former CEO Mayo Schmidt. Schmidt retired soon after the election and the province, which is the largest shareholder in the company, made wholesale changes in its governance. Dobson was named acting CEO in July and Lopez was placed in his interim role in September. The board was replaced by an interim body in August. While the company is making "very good progress" in its search for a new top executive, Dobson declined to say when a new chief might be made.

The new CEO is expected guide the company through the completion and integration of the acquisition of Spokane, Wash.-headquartered Avista, which owns gas and electricity utilities in several western U.S. states. S&P Global Ratings on Sept. 13 downgraded the issuer credit ratings of Hydro One and its subsidiary Hydro One Inc. to A- from A, reflecting the impact of legislation by the government of Ontario regarding executive compensation.

Separately on Nov. 8, Hydro One reported third-quarter 2018 adjusted net income attributable to common shareholders of C$227 million, or 38 Canadian cents per diluted share, compared with C$237 million, or 40 Canadian cents per diluted share, in the same quarter in 2017. The results beat the S&P Global Market Intelligence consensus normalized EPS estimate of 34 Canadian cents. On Nov. 7, Avista reported net income attributable to shareholders of US$10.1 million, or 15 U.S. cents per diluted share, in the third quarter, improving from US$4.5 million, or 7 U.S. cents per diluted share, in the prior-year period.

PGE Proposes Nation's Most Ambitious Smart Grid Pilot, Steve Ernst – Clearing Up

Portland General Electric has asked the Oregon PUC to approve the most ambitious demand side resource pilot program in the nation that the utility says would integrate smart grid technology on a scale never before attempted.

In an Oct. 26 filing with the commission, PGE describes a demand side resource program that would encompass 20,000 customers in Hillsboro, Portland and Milwaukee.

The utility says the proposed $5.9 million, two-and-a-half-year project hopes to achieve at least 66 percent participation by elig ble residential customers, and between 25 and 40 percent from commercial customers. Typical demand response programs around the country achieve less than 7 percent participation rate, the utility says.

The strategy is to acquire participation by "moving all residential customers into the testbed," but those customers will be able to "opt out at any time," the filing said.

PGE will need to upgrade multiple feeders at three substations with smart grid technologies such as remote controls that it says will increase system reliability and enhance safety and cybersecurity.

The program sends participating customers a signal to conserve energy and those responding will get a credit on their bills.

The testbed will include a residential direct-load control thermostat pilot that allows PGE to communicate directly with residential thermostats.

A multiple family residence demand-response water heater pilot would be offered through PGE's Tariff Schedule 4, and was chosen because of the high concentration of electric water heaters in the cities where the pilots will be conducted.

A residential pricing pilot, using PGE's Tariff Schedule 6, would offer a series of time-of-use pricing to help PGE explore issues based on the types of residential customer load shape profiles.

The utility hopes to develop several other pilots in the testbed during project, such as new water heaters for single-family residences, and thermostats at multifamily units, as well as a residential storage pilot program and level-2 smart charging stations for electric vehicles.

Plans are already underway to develop "electric avenues" in Milwaukee and Hillsboro that will feature multiple EV charging stations found at PGE's original electric avenue in Portland.

The company hopes to launch the pilot program next year, with the "primary goal" of exploring "how to accelerate the development of DR as a cost-effective resource replacement to help address the 2021 resource capacity need" identified its 2016 integrated resource plan.

The IRP calls for acquiring 77 MW of DR in the winter and 69 MW in the summer by 2021. The "Smart Grid Testbed" will increase PGE's understanding of how customers will accept and respond to DR programs.

"We are pursuing a new type of service paradigm and pursuing a new type of resource that is anchored with the customer" Jason Salmi Klotz, emerging technology manager at PGE, told *Clearing Up.*

Salmi Klotz told *Clearing Up* that there are devices and technologies out there to solve almost any problem. "But the question is, are the customers interested? Do they get it? Do they want it?"

"What will the partnership between the customer and utility look l ke?" he continued. "The [utility] service paradigm has always been one-way, but in order to move to a decarbonized future there needs to be more a partnership between utilities and customers."

PGE hopes to make the DR a seamless experience for customers by helping them automate

their smart devices in concert with grid operations.

During times when demand for electricity is especially high in the region, customers will be able to decide on an event-by-event basis if they want to participate in reducing their overall energy consumption.

"This new model we are creating is about a relation ship with customers where they get it, love it and forget about it," Salmi Klotz said.

OPUC directed PGE to form a demand-response review committee when it acknowledged the company's 2016 IRP to help guide the program.

Members of committee include the Energy Trust of Oregon, the Northwest Energy Efficiency Alliance, Pacific Northwest National Lab, Oregon Citizens' Utility Board, Oregon Department of Energy, Alliance of Western Energy Consumers, Northwest Power and Conservation Council staff, and OPUC staff.

In May 2018, Jon Wellinghoff, CEO of Grid Policy and former FERC chair, contacted PGE and asked to be part of the effort to conceive and implement the project.

"The PGE Smart Grid Test Bed represents a leap forward in the relationship between customers and their energy providers," Wellinghoff said in a prepared statement when the utility announced its plans Oct. 11. "By providing customers with more control over their energy consumption and carbon footprint with the latest in control technology, PGE is on a path to building a model that energy providers everywhere can learn from and replicate."

Lawsuit: PPL 'Stripped' Value From PPL Montana Before Selling to Talen Energy, Steve Ernst – Clearing Up

Talen Energy, the merchant owner-operator of the Colstrip Generating Station, says it was defrauded by PPL when it purchased the company's Montana subsidiary, PPL Montana, in June 2015.

In a pair of lawsuits filed Oct. 29 in Montana state court in Rosebud and Lewis counties, Talen Energy Marketing and Talen Montana Retirement Plan claim officers of Pennsylvania-based PPL and its board of directors fraudulently "stripped" approximately $733 million from its subsidiary before selling it to Talen Energy.

The suit claims PPL "schemed to strip the real value of the company" by distr buting the $900 million proceeds from the sale of 11 hydroelectric dams to NorthWestern Energy, leaving PPL Montana "insolvent" and unable to pay its pension responsibilities or cover its share of an estimated $700 million in clean-up costs at the coal plant.

The lawsuit also alleges what has long been speculated-the Colstrip Generating Station is losing money and has almost no resale value. Talen says the 2,200-MW coal plant had fair market value of just $5 million in 2013, carries over $700 million in environmental liabilities, and is losing money.

Talen's argument starts with PPL's $796 million purchase of Montana Power in 1999. Thanks to deregulation in Montana, which the suit says raised wholesale electricity prices by 50 percent in the state, PPL was "extremely profitable," making "more than $325 million in profits from 1999 to 2012, according to the lawsuit.

But PPL Montana's fortunes changed in 2012 because of "a combination of environmental activism, stricter regulations, increased fuel costs and competition from subsidized renewable generation," the suit claims.

The Montana DEQ announced 2012 it would impose extensive closure, remediation and financial obligations on PPL Montana to address issues due to long-term seepage from Colstrip's four coal ash ponds. An environmental contractor of PPL Montana estimated it would cost $198 million to clean up the ponds, and an additional approximately $500 million to remediate the power plant site. (The $198 million figure does not include the cost of moving to dry ash storage, as required in 2012 settlement with the company.)

As a result, the two coal plants the company owned, Colstrip and the 173-MW Corette Plant near Billings, were projected to lose money, while its hydro assets were profitable but "not sufficient to offset the negative margin from Colstrip and Corette," the lawsuit claims.

Because of the new coal ash regulations, PPL Montana internally assigned the four-unit Colstrip plant a fair market value of $5 million in 2013, the lawsuit says.

In September 2013, PPL announced it had reached a deal to sell the 11 hydro facilities to NorthWestern Energy for $900 million. In June 2014, before the sale of the hydro assets was finalized, PPL announced it was selling the beleaguered coal plants to the private equity firm Riverstone Holdings, which then combined those units with other merchant power plants to form Talen Energy.

At that point, PPL Montana had already announced plans to close the Corette plant in 2018. Corette would eventually be shut down in August 2015.

The hydro deal closed in November 2014, and Talen took control of Colstrip and the soon to be mothballed Corette plant in June 2015.

Talen claims proceeds from the hydro sale were immediately distributed to various PPL board members and limited liability corporations controlled by members of PPL's board. The distribution left PPL Montana insolvent, the lawsuit says. "PPL Montana's late 2014 business plan projected negative cash flow over the next five years after accounting for expected environ mental remediation costs" of the coal portfolio, according to the filing.

"By stripping this value out of PPL Montana" and "disregarding substantial liabilities," PPL rendered PLL Montana "insolvent and unable to fund its significant obligations" to fund both environmental remediation needed at the site, pay its creditors and finance the company's

pension plan, the lawsuit says.

"Following the sale, all that remained at PPL Montana to satisfy its obligations to its creditors were its coal-fired assets, which are projected to generate negative cash flow for the foreseeable future and are burdened with substantial environmental and other liabilities," the lawsuit says.

At no time during the distr bution of the funds did PPL or any of its managers "implement any process to determine whether PPL Montana would be solvent after the distribution," the lawsuit claims.

Talen says PPL knew in June 2010, when the first draft of coal ash regulations were published, that "PPL Montana would face substantial environmental liabilities."

The lawsuit says that PPL was motivated to sell its Montana assets because it was "financially stressed" after acquiring $13 billion in debt to buy a pair of regulated utilities in Kentucky and the UK. PPL also needed to spend more than $15 billion on capital projects between 2011 and 2015 to modernize its existing facilities in Pennsylvania, the lawsuit claims.

"PPL's officers and directors decided, among other things, to strip the value of PPL Montana and leave it as an empty shell to face its mounting environmental and other liabilities," the lawsuit says.

Calls to Talen Energy and PPL were not returned.

Dale Lebsack, president of Talen Montana said in a prepared statement that "we are asking PPL to fulfill its obligation to the Colstrip plant, the state of Montana and the Colstrip plant employees and retirees."

The first lawsuit, which is a class action suit filed by the Talen Montana Retirement Plan and other plaintiffs, claims PPL and its directors improperly transferred $733 million in proceeds from the sale of its Montana hydroelectric assets, leaving Talen without adequate funds to pay its obligations on its own.

In the second lawsuit, Talen claims that PPL and certain of its directors breached their fiduciary duties by causing PPL Montana to pay an improper $733 million dividend to PPL in November 2014, in the amount of the net proceeds of the Montana hydroelectric asset sale received by PPL. These funds should have remained with Talen to fulfill PPL's legacy obligations in Colstrip, Mont.

William Spence, chairman, CEO and president of PPL, said during the company's third quarter conference call with analysts on Nov. 1 that PPL Montana's pension liability was "96 percent funded" at the time of the spinoff.

"Under the separation agreement related to the spin off of PPL's competitive generation business in June of 2015, you may recall that Talen Energy and affiliates of Riverstone, which is a private investment firm that acquired 35 percent of Talen in the spin and later took Talen private, definitively agreed that PPL was entitled to retain these proceeds from the sale of the hydro assets. I don't think that is in any way in question," Spence said.

"We flatly disagree with Talen," he added. "And we' re confident we acted appropriately in all the transactions related to either the sale of PPL's Montana hydroelectric generating assets or the spin-off of PPL's competitive generation business."

The lawsuit may be just another warning of the financial troubles and murky future of the second largest coal plant in the West. In 2016, Talen said it wanted to sell its stake in Colstrip by mid-2018, but changed its mind last summer. Talen executives told a Montana legislative committee in 2017 that the plant is losing $30 million annually.

The lawsuit comes just a few weeks after the Westmoreland Coal, which owns the mine that supplies coal to Colstrip plant, filed for bankruptcy.

Calif. utilities exceed renewable-energy goals as customers continue to flee, Jeff Stanfield - SNL

California investor-owned utilities have exceeded the state's renewable energy goals, regulators said in an annual report to state legislators. Meanwhile, the incumbent utilities are losing millions of customers to community choice aggregators that will have to buy more power from renewable sources in order to meet state requirements.

The California Public Utilities Commission estimated that investor-owned utilities will obtain an average of 40% of their electricity from renewable sources this year and are on pace to achieve 50% by 2020, according to the 2018 California Renewables Portfolio Standard Annual Report. Sempra Energy subsidiary San Diego Gas & Electric Co. got 44% of its retail sales from renewable energy in 2017, while PG&E Corp. subsidiary Pacific Gas and Electric Co. had 33% and Edison International subsidiary Southern California Edison Co. reported 32%. Aggregators will reach 46% in 2018, but will slip to 30% by 2020, the report found.

California's Renewable Portfolio Standard requires that 60% of the state's electricity come from renewable sources by 2030.

The California Community Choice Association, or CalCCA, said by email that the aggregators have either already met or plan to meet or exceed California's RPS mandates, including the 60% RPS in 2030. That assessment is based on members' integrated resource plans filed this year, CalCCA said.

The report highlighted the fact that utility progress toward RPS goals becomes increasingly less relevant as millions of customers buy their energy from alternative electricity providers. Investor-owned utilities have estimated that they could lose 60% to 80% of their current electricity customer demand over the next eight to 10 years. As additional aggregators are formed, the PUC said, state regulators will oversee a smaller percentage of renewable

procurement in the state.

At the same time, they have limited jurisdiction over the procurement activities of aggregators and other nonutility energy providers. Community choice aggregation enables municipalities to form agencies to purchase energy on behalf of electricity customers in their jurisdictions.

For the 2018 RPS report, the commission said data was not available for 10 aggregators who launched in localities throughout the state in 2018, so the report is based on data the PUC received through 2017. CalCCA provided S&P Global Market Intelligence with a list of 17 aggregators projecting that an average of 44% of retail sales will come from renewables in 2020, and 61% by 2030. Seven aggregators have signed 59 contracts for more than 2,100 MW of new construction, the association said.

"That is impressive, considering two years ago only five CCAs existed with a combined load of around 5,000 GWh," said CalCCA Executive Director Beth Vaughan.

The state's three major utilities are forecast to continue to buy renewable energy above their RPS requirements for the next six years, the report said. They may choose to apply their excess renewable energy to meet the standard in future compliance periods or sell renewable energy credits to aggregators and other suppliers such as smaller utilities and energy service providers.

Nevada defeats initiative to open electricity market and end monopolies, **Jeff Stanfield - SNL**

In what pundits called a battle of the billionaires, Nevada voters on Nov. 6 turned back an initiative to amend the state's constitution to establish an energy market in place of NV Energy Inc.'s near-statewide monopoly on electric power supplies.

The Energy Choice Initiative, which appeared on the statewide ballot as Question 3, fell after polls indicated that public opinion had turned against what critics had characterized as a California-style attempt at deregulation. According to the Nevada secretary of state's office as of 6:30 a.m. ET, 66.8% of the votes went against the measure.

However, 59.5% the state's voters backed a 50%-by-2030 renewable energy initiative, but they will have to return to the polls in two years and approve the constitutional amendment a second time for it to take effect. Question 6, the Renewable Energy Promotion Initiative, would require NV Energy and alternative energy suppliers in the state to get half the power they sell from renewable resources, such as solar, geothermal and wind.

About 20% of Nevada's energy comes from renewables, and the state's standard requires 25% by 2025. Billionaire climate activist Tom Steyer and his NextGen Climate Action group circulated petitions to put Question 6 on the ballot, similar to a simultaneous voter initiative in Arizona.

Voters had to go to the polls twice to change the Nevada Constitution, and in the intervening two years NV Energy prepared a comeback battle for survival as a vertically integrated utility that owns generation, transmission and distr bution facilities.

The company and its Nevada Power Co. and Sierra Pacific Power Co. subsidiaries softened their stance to accommodate rooftop solar customers, after utility regulators allowed them to end retail net metering for new and existing customers in 2015. The companies promised to support utility-scale solar projects, and recently proposed more than 1,350 MW of new solar projects. NV Energy has even vowed to strive toward a 100%renewable energy portfolio.

In all, NV Energy spent $32.77 million to defeat Question 3 with the backing of investor Warren Buffett, who heads NV Energy parent Berkshire Hathaway Energy and multinational conglomerate Berkshire Hathaway Inc. The vote had been cast as a "battle of the billionaires," as casino magnate Sheldon Adelson's Las Vegas Sands Corp. rolled more than $13 million into a campaign favoring the initiative. Switch Inc. data-center founder and CEO Rob Roy chipped in another $10.9 million in the second round of campaigning for the initiative.

Question 3 backers asserted that NV Energy's monopoly has been a roadblock to big employers who otherwise would want to invest in Nevada if they were free to buy cheaper energy supplies as they saw fit.

NV Energy and state regulators warned that ending regulated monopolies in Nevada would lead to billions of dollars in stranded costs that ratepayers would have to cover if the utility company was forced out its role as the main provider of electric power in Nevada. Several major environmental groups questioned whether a new market structure would lead to lower electricity rates and more renewable energy and opposed Question 3.

Natural Resources Defense Council senior scientist Dylan Sullivan said passage of Question 3 would have resulted in years of market uncertainty while the legislature figured out how to implement complex restructuring.

In the end, the utility-backed Coalition to Defeat Question 3 successfully cast the initiative as the work of big money casinos who just wanted to seek cheaper out-of-state energy supplies, regardless of renewable energy content, and were willing to risk the stability of the state's electric supply for other customers in order to do so.

Draft NERC report: Power outages possible if coal, nuclear plants close rapidly, Esther Whieldon - SNL

The organization that oversees reliability on the North American electric grid warns that an accelerated retirement of coal-fired and nuclear power plants over the next several years could lead to power outages, temporary shortfalls in surplus generation and transmission problems in several regions.

As a result, grid operators may need to rely more heavily on special contracts that pay generators to remain online until those risks are abated, the North American Electric Reliability Corporation said in a draft report obtained by S&P Global Market Intelligence titled "Accelerated Generation Retirements; Special Reliability Assessment" and dated Sept. 5. The report also suggested that regional grid operators "evaluate policies so that incentives exist to maintain necessary levels of essential reliability services and fuel assurance in the future resource mix."

Largely due to their inability to remain competitive in the face of cheaper natural gas-fired and renewable generation, U.S. coal and nuclear generators are closing in large numbers and the nation's energy mix is undergoing a major shift away from those fuels. But that trend has raised concerns about whether the system can handle such a rapid change and additional incentives are needed to keep more plants from retiring.

As of 2017, more than 46.5 GW of mostly older coal-fired generation had retired in the U.S. since 2011, and another 19 GW worth of projects were slated to close by 2027, according to the report. NERC said at least half a dozen nuclear units have retired since 2012, and 14 more units have announced plans to retire by 2025.

The Trump administration, particularly the U.S. Department of Energy, has proposed and is said to be mulling additional options for propping up financially ailing coal and nuclear generation in the name of resilience. Owners of the struggling nuclear and coal generation projects have pled for federal and state intervention, arguing that their projects can supply a degree of reliability that gas and renewables projects cannot.

The NERC report offers a high-level perspective on the risks the energy system could face from rapid plant retirements combined with either an extreme weather event or a fuel supply emergency such as a natural gas terminal going offline for an extended period. But NERC spokeswoman Kimberly Mielcarek in an email noted that the assessment should not be viewed as a prediction of future events. The "accelerated scenario is a stress-test intended to identify risks to reliability and is not a predicative forecast," she said.

NERC expects to publish the assessment in December, Mielcarek said. The version obtained by S&P Global Market Intelligence was circulated at the September meeting of NERC's planning committee. One U.S. grid operator, the PJM Interconnection, is slated to release its own fuel assurance report Nov. 1.

Whether NERC intends to take additional steps as a result of the report remains unclear. NERC CEO and President Jim Robb in a September press briefing indicated that the agency is considering establishing a mandatory, industrywide reliability standard for fuel assurance. The idea behind fuel assurance is that the ability of some types of generators to store fuel on-site provides a level of reliability that renewables and gas-fired projects cannot offer.

Not enough generation to go around

Much of the NERC assessment focused on the potential impacts of retirements on the Mid-Atlantic, Midwestern, Northeastern and Texas systems, but the document also reviewed risks for the systems in the Southeast, Rocky Mountain area and Southwest.

NERC considered two rapid mass retirement scenarios and found that insufficient new gas or renewable generation is in the pipeline in most regions to replace those coal and nuclear plant closures by 2022. Of the areas NERC reviewed, only the New York ISO region would have enough generation to go around under both scenarios.

The more extreme retirement scenario assumed that about 60% of coal and 75% of nuclear generation retire by 2022, and the low scenario assumed that about 30% of coal and 45% of nuclear projects retire by then. Under both scenarios, NERC assumed that gas generation would replace the lost nuclear and coal capacity regardless of whether enough gas capacity currently is expected to be online by 2022.

In contrast, the Midcontinent ISO, the SERC southeastern region, Southwest Power Pool and the two Western systems examined would "experience an exhaustion of all reserves and prospective generation resources currently in planning" under the low retirement scenario, the draft said.

The U.S. Energy Information Administration has projected a much more gradual pace of retirements over a longer period, the report said. The EIA's 2018 energy outlook forecast that 12% of existing nuclear generation would retire by 2030 and 25% of coal generation would retire by that year.

Texas, New England may face issues

At NERC's request, the Electric Reliability Council of Texas updated a 2016 transmission study to see how the grid would handle the removal of nearly 9,600 MW of coal-fired units, or almost half of the region's installed coal capacity. ERCOT found that the plant closures could result in more than 124 circuit-miles of 345-kV power lines and 12 circuit-miles of 138-kV lines experiencing thermal overloads. Thermal overload can cause lines to trip and go offline and also can damage transmission equipment. NERC in the draft assessment said ERCOT must address potential thermal overloads prior to generator retirements.

Public Service Enterprise Group Inc. also performed a study of the impact of retirements on the grid managed by PJM in 13 Mid-Atlantic and Midwestern states and the District of Columbia. The company found that the retirement of 70 GW of generation could result in "multiple thermal overloads" on 230-kV, 345-kV and 500-kV lines. Most of those lines are in states along the Atlantic coast, according to a map NERC included in the draft report. But overloads also could happen on lines in northeastern Illinois and those near the border between Ohio and Pennsylvania.

A portion of the study focused on the ISO New England region, which in recent years has grown increasingly dependent on gas-fired generation. Most of those generators do not hold firm fuel

supply contracts and instead make purchases through the secondary market. But in the winter, particularly during extreme cold snaps, those surplus supplies sometimes dry up because the gas is being used to meet customers' indoor heating needs.

The ISO-NE in a January fuel-security analysis found that the retirement of 4,500 MW of coal- and oil-fired power plants by 2025 could result in 105 hours of load shedding, or rolling blackouts, over 16 days, the NERC report noted. The New England grid operator also found that a winter-season-long outage of a natural gas pipeline compressor potentially could trigger up to 138 hours of load shedding over 17 days.

Regional grid operators have processes that account for generation retirements and additions, but the report noted that those measures can take five years or more and may not be suited to handle retirements if they occur at a faster pace. Regional grid operators have one last resort option, however, called reliability-must-run contracts, under which closing generators are paid to stay online until transmission lines can be built or new plants become operational. The NERC assessment suggested the grid operators may need to rely on those arrangements more frequently going forward.

After the ISO-NE issued its fuel assessment, the grid operator in September proposed to update its existing rules to allow it to sign reliability must-run agreements with generators to address fuel security concerns that may arise if the projects retire. The proposal was prompted by Exelon Corp.'s announcement in March that it would close its combined-cycle, natural gas- and waste heat-fired Mystic River 8 and 9 units in 2022.

Utility groups wary of US EPA's focus on coal-fired power plant upgrades, Zack Hale - SNL

The Trump administration's proposed replacement for the Obama-era Clean Power Plan is designed to give states more flexibility to cut carbon emissions, but three of the nation's major electric utility trade groups are worried the U.S. Environmental Protection Agency's new plan still is too rigid.

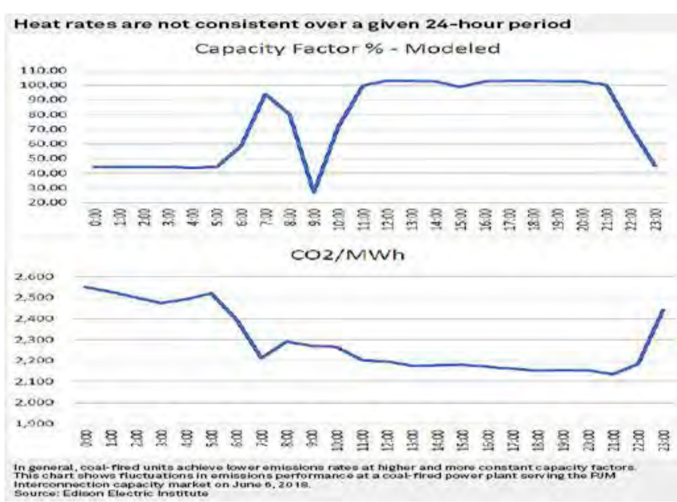
While the Clean Power Plan encouraged a nationwide shift toward renewable energy sources, the EPA's proposed Affordable Clean Energy, or ACE, rule would determine that efficiency upgrades called "heat-rate improvements" at individual coal-fired power plants are the best way to reduce climate-changing carbon dioxide emissions from the power sector. However, the ACE rule's narrow focus on heat-rate improvements at individual units presents its own set of challenges, the Edison Electric Institute, American Public Power Association and National Rural Electric Cooperative Association said in separate comments filed with the EPA.

Issued in 2015, the Clean Power Plan sought to meet the goals of the international Paris Agreement on climate change by encouraging U.S. utilities to depend more heavily on zero-polluting generation. Under that rule, states were given three main options: improving the heat rate of existing coal-fired power plants, relying more heavily on lower-emitting existing natural gas plants, and boosting the use of renewable energy sources such as wind and solar. The Clean Power Plan also would have allowed states to use energy efficiency and participate in a regional emissions trading program to help meet their CO_2 targets.

In contrast, the proposed ACE rule would define the "best system of emission reduction" for CO_2 emissions as heat-rate improvements to existing coal-fired power plants. Proponents of the plan have argued that the rule's "inside the fenceline" approach represents a legal alternative to the Clean Power Plan, which was stayed by the Supreme Court in 2016 before it could take effect. By reducing the amount of heat needed to produce a unit of electricity, coal plants can reduce the amount of fuel used and CO_2 emitted, the plan's supporters note.

The ACE rule also would allow plant operators to modify existing facilities without triggering additional environmental controls under a program known as new source review, possibly extending the lives of plants headed for retirement. Weakening new source review regulations could result in greater emissions over time by allowing coal-fired plants to run longer, critics argue.

Heat rates



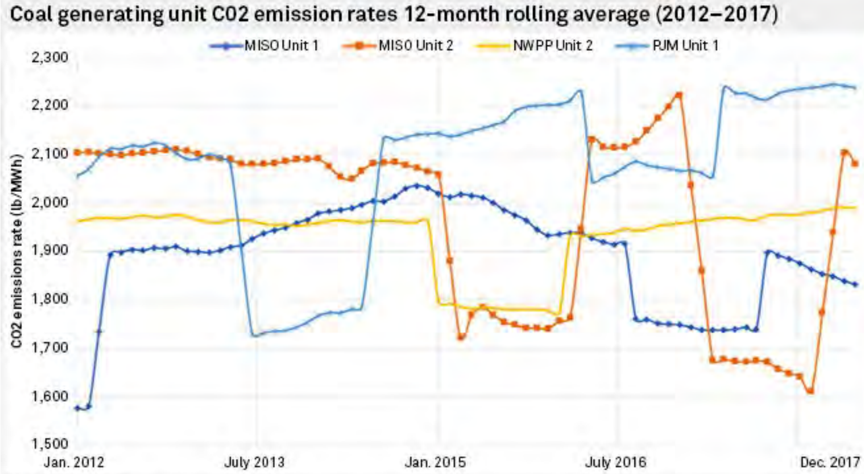
In general, coal-fired units achieve lower emissions rates at higher and more constant capacity factors. This chart shows fluctuations in emissions performance at a coal-fired power plant serving the PJM Interconnection capacity market on June 6, 2018.
Source: Edison Electric Institute

Under the ACE rule, states would have three years to prepare and submit plans that include performance standards for individual coal-fired power plants based on a menu of optional heat-rate improvement technologies. The options include installing intelligent sootblowers, boiler

feed pumps, leakage controls, blade path upgrades and other new components. The performance standards would need to reflect the degree of emissions reductions specific plants could achieve through heat efficiency gains, but establishing reductions targets would be left to the states.

The EPA in its proposal said variations in heat rates among generators with similar design characteristics, as well as year-to-year variations in heat rates at individual units, means "there is potential for [heat rate improvements] that can improve CO2 emission performance." However, EEI in its comments said the ACE rule fails to recognize that constantly fluctuating heat rates at individual units could make setting emissions targets for specific units difficult for states. "Put simply, emissions rates vary considerably over time," EEI argued

Geography, elevation, unit size, pollution controls, firing method and utilization rates all are factors that can affect the efficiency and performance of a unit, the group said. EEI also noted that heat-rate improvements degrade over time, creating another level of emissions rate variability. "These factors may make it difficult for states to establish an emissions standard for an affected unit that can be achieved continuously," EEI said.

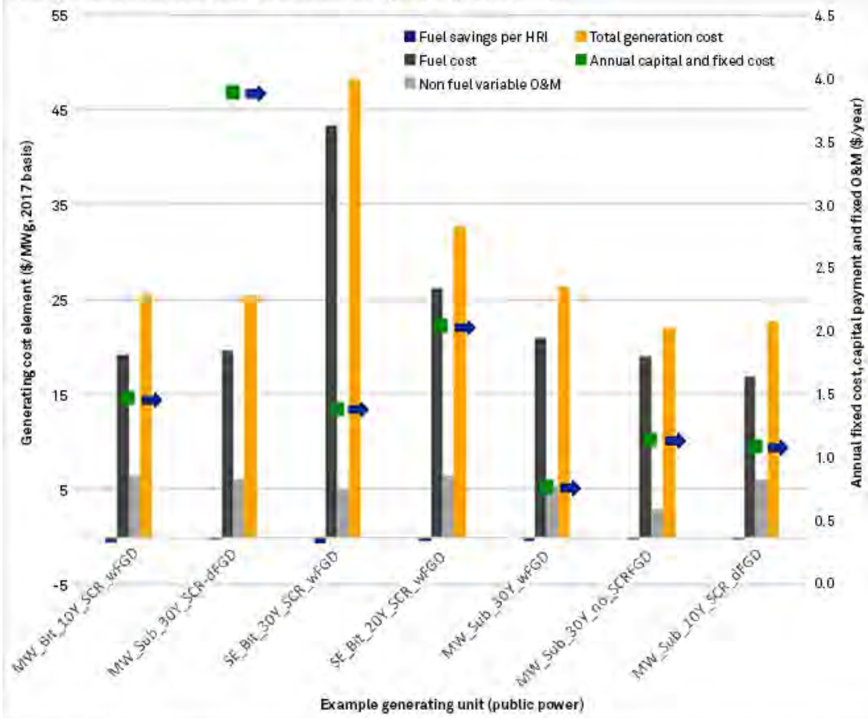


As of December 2017.
This graph demonstrates that there are significant changes in a coal-fired electric generating unit's heat rate and corresponding CO2 emissions rate when measured over a period of years.
Sources: Edison Electric Institute; U.S. Environmental Protection Agency; ABB Velocity Suite

APPA agreed, noting that emissions rates at individual coal-fired units may be achievable one year but not another because those units are required to ramp up and down to varying degrees as cheaper renewable and gas-fired energy sources are added to the electric grid. "Heat rate can vary within and among steam generating units for a wide variety of reasons that are beyond the control of the unit's owner or operator," the group said. "For that reason, the existence of heat rate variability is not a valid indicator of the need or opportunity for significant improvement in a unit's heat rate."

APPA also hired a consultant to evaluate the economic impact of implementing the heat-rate improvement technologies identified in the ACE rule, which found that potential heat-rate improvements at seven different coal-fired units would produce fuel savings of 1% to 2% compared to total generation costs. Meanwhile, NRECA said "return on investment for many of these menu items will be hard to achieve." However, all three utility groups agreed that some units can improve their heat rate, and in turn their CO2 emission rates.

Comparisons of cost metrics: HRI on 7 public power units



As of Oct. 31, 2018.
This graphic compares various cost metrics for a group of seven public power coal-fired units analyzed by consultants for the American Public Power Association. The analysis indicates that heat-rate improvement candidate technologies identified by the U.S. Environmental Protection Agency in the ACE rule would reduce generation costs by 1% to 2%.
HRI = heat-rate improvement
Source: American Public Power Assocation

COMPLIANCE FLEXIBILITIES

The ACE rule would give states discretion to establish averaging times for emissions at affected power generators, and the EPA also has also proposed allowing limited averaging across affected units within the same facility for compliance purposes. But all three utility groups are seeking additional ways to comply with the rule."

Averaging across a larger number of units — for example, those within a state — could help address overall emissions variability, while still ensuring that emissions rates are achieved," EEI said. Given the annual and multi-year variability in emissions for some units, longer averaging periods could also be appropriate, the group said. And similar to the Clean Power Plan, EEI suggested allowing states to establish emission tradings programs as another compliance flexibility, noting that many individual power plant operators opted to participate in trading schemes under the 1990 Acid Rain Program to reduce sulfur dioxide emissions. The EPA also should allow states to adopt different compliance deadlines for individual units based on remaining useful life, cost, technical feasibility and other factors, APPA said.

If the ACE rule is not changed, the proposal risks violating Section 302(k) of the Clean Air Act, which requires the agency to establish standards that limit the quantity, rate or concentration of emissions of air pollutants "on a continuous basis," EEI said. "Courts have interpreted this requirement to mean that standards should apply at all times and that efforts to exempt periods of operation are contrary to the plain language and intent of the " law.

Moody's finds renewables pose low stranded asset risk for US utilities, Esther Whieldon - SNL

The rapid growth of renewable generation in the U.S. is unlikely to prompt newer regulation-based existing coal-fired and natural gas plants to become stranded assets, Moody's Investors Service said in a recent note.

Regulators have a strong track record dating back to the 1990s of allowing utilities to recover the costs of potentially stranded assets from customers so long as those projects were initially allowed to be included in the utility's rate base, Moody's said in a Nov. 5 note titled "Renewable generation transition unlikely to create significant stranded asset risk."

Moreover, the transition to a low-carbon economy may take decades, which would give utilities time to make the transition and further depreciate the value of existing fossil-fuel projects to minimize the unrecovered value of those assets. At the same time, more aggressive renewables policies could increase stranded costs, Moody's warned in the report that focused on electric and gas utilities.

The analysis focuses solely on how the growth of renewables could impact the potential for regulation-based stranded assets — investments that government regulators approved to earn a rate of return over a defined period of time.

The findings by Moody's shed new light on how much of a material risk the transition to a low-carbon economy to tackle climate change poses for U.S. utilities. Large investors have been pressing utilities in recent years to study and disclose publicly their climate-related risks and adaptation plans over concerns that a rapid shift to low-carbon technologies driven by markets and regulations could mean utilities are left with unrecovered costs tied to fossil-fuel

investments.

"We expect that overall stranded asset exposure will remain relatively small," Moody's said.

Over the past decade, regulated utilities have retired 65% of their coal plants, but those closures resulted in only a relatively small number of stranded assets because most of the retired plants were older and the value of the plants on the companies' balance sheets had substantially depreciated and had little remaining book value.

But newer and more efficient coal plants still have significant book value largely related to pollution control equipment installed to comply with environmental regulations. Utilities plan to keep most of the plants running until the end of the projects' useful lives, which for many is between 2030 and 2040, Moody's said.

Because gas-fired plants are generally much cheaper than those fired by coal, and battery storage technology and newer gas-fired projects can start and ramp up and down more quickly than coal plants, Moody's said it is unlikely gas plants will face early closure. "As battery costs come down, this calculus could change," the note said.

Moody's offered two examples of when the costs of regulation-based assets could become stranded. In one instance, a utility closes a power plant early and has recovered only $400 million of its $1 billion investment, leaving the remaining $600 million stranded. Likewise, a regulation-based stranded asset could be the result of deregulation, such as when a plant that had been protected by rate-of-return regulations is now in a competitive market. In that case, the value of the stranded asset is calculated as the difference between the book value and the market value of the asset.

History shows that regulators have almost always been willing to let utilities recover their stranded asset costs, Moody's said. During the deregulation effort in the late 1990s, many states required utilities to expose their regulated generation assets to market competition. Regulators allowed those utilities to recover more than $100 billion in combined stranded assets based on the difference between the book value and the market value of their regulation-based generation assets.

While Moody's found renewables pose a low risk to utilities having regulation-based stranded assets, the analysts noted other factors could change that dynamic. Advances in clean energy technologies or more stringent environmental regulation could also create stranded asset exposure to other subsectors among regulated utilities.

Moreover, if customers with self-generation disconnect from the electric grid, "the stranded cost risk could be material," although Moody's said it views that scenario as highly unlikely because of the high cost of battery storage. And while deep economy-wide electrification could have a credit impact on gas distribution and the pipeline sector, Moody's again saw little chance of such a change occurring so long as domestic natural gas continues to be one of the cheapest options for home heating.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 11/27/2018 09:56:57 AM

To: Aldis.Raisters@gapac.com; Hugh.O.Pierce@tsocorp.com; kwilson@legadv.com; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; mruckwardt@schn.com; Noel.Mak@ATImetals.com; Samuel.Liebelt@kapstonepaper.com; todd.wiseman@solvay.com; tom@richlandpaper.com; Aldis.Raisters@gapac.com; jeff.steed@northwesthardwoods.com; Mark_R@columbiasteel.com; Martha_C@columbiasteel.com; mike.kuhn@westrock.com; Noel.Mak@ATImetals.com; Samuel.Liebelt@kapstonepaper.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; mary.mccordic@shell.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; SteveHarper@thisisnoble.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Alex Koleber; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials com>; Bill Smith <Bill.Smith@airliquide.com>; Boz <vanhoutb@ohsu.edu>; Brad Beavers <bbeavers@timberproducts.com>; Brad Troup <Brad.L.Troup@tsocorp.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@NipponDynawave.com>; Briane Keene <BrianR.Keene@airliquide.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <WittmannConsultingLLC@outlook.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Chad Sorber <sorber@ohsu.edu>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leon <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Dan Riley <daniel.t.riley@tsocorp.com>; Dave Post <Dave.Post@wahchang.com>; David Barge <David.A.Barge@tsocorp.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Mitcheltree <DBM@EESconsulting.com>; David Tobin <DavidTobin@BoisePaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <Don.Sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@precastcorp.com>; Eric Streicher <Eric.Streicher@Airgas.com>; Ernesto M Negrete <Ernesto.M.NegretePapadakis@tsocorp.com>; Fawn Barrie <fbarrie@legadv.com>; Gary Collison <GCollison@pccstructurals.com>; Graham Bailey <graham.bailey@NipponDynawave.com>; Greg Miller <greg.miller@weyerhaeuser.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; JaDPrice <JaDPrice@gapac.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell.com>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.org>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Marty Sedler <marty.sedler@intel.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Broughton <michael.l.broughton@boeing.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@RockTenn.com>; Michael Kuhn <mkuhn@RockTenn.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.Slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@DeltaEnergyllc.com>; Nick Kaiser <Nick.Kaiser@NipponDynawave.com>; Public Affairs Counsel <pac@pacounsel.org>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <PLydon@LHS.org>; Pat Ortiz <Patrick.Ortiz@kapstonepaper.com>; Patrick Loupin <PatrickLoupin@PackagingCorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@Ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Sandi Swarthout <sswarthout@capconn.net>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <Scott.R.Hawley@tsocorp.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steve Wood <S.Wood@resolutefp.com>; Steven Castracane <steven.castracane@linde.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tony Hardenbrook; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; William McMahon <william.mcmahon@ipaper.com>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Gilmore <billmg@penwool.com>; Boz <vanhoutb@ohsu.edu>; Brian Wood <brian.wood@NipponDynawave.com>; Brian Wood <brian.wood@NipponDynawave.com>; Bruce Martin <bruce.martin@westrock.com>; Calli Daly <calli.daly@kochps.com>; Chad Sorber <sorber@ohsu.edu>; Chad Stokes <cstokes@cablehuston.com>; Charley <[redacted]>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <chris_h@columbiasteel.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; Dave Rickman <dave.rickman@kaisertwd.com>; David Clemens <David.Clemens@darigold.com>; David Hawk <[redacted]; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Dave Post <Dave.Post@wahchang.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <don.sturtevant@simplot.com>; Drew Bryck <drew.m.bryck@boeing.com>; Ed Coghlan <Ed.coghlan@onsemi.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@precastcorp.com>; Gary Collison <GCollison@pccstructurals.com>; Greg Miller <greg.miller@weyerhaeuser.com>; Greg Takisaki <Greg.takasaki@kaisertwd.com>; Jake Evans <Jake.evans@onsemi.com>; JaDPrice <JaDPrice@gapac.com>; Jared Sommer <sommerj@byui.edu>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jennifer <jenny@pacounsel.org>; Jim Duke <jduke@idahoan.com>; JL Wilson <jlwilson@pacounsel.org>; Joe Burrell <Joseph.g.burrell@jci.com>; John Carr <jcarr@awec.solutions>; John Latimer <john.latimer@shell.com>; Justen Rainey <justenr@pacounsel.org>; Keith Warner <keith.c.warner@boeing.com>; Kristine Dippold <Kristine.A.Dippold@boeing.com>; Kyle Williams <williamsk@byui.edu>; Laura Jane Schaefer <schaefel@ohsu.edu>; Mark Dunn <mark.dunn@simplot.com>; Mark Steele <steele@norpac.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Michael Broughton <michael.l.broughton@boeing.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Mike Hale <Michael.Hale@simplot.com>; Nick Avenetti <nick@perlite.com>; Kaiser, Nick <Nick.Kaiser@NipponDynawave.com>; Pat Lydon

<PLydon@LHS.org>; Pat Ortiz <Patrick.Ortiz@kapstonepaper.com>; Phil Foss <phil.foss@onsemi.com>; Phil Zirngibl <Pzirngi@gapac.com>; Rick Stricker <rstricker@baf.com>; Sarah Schack <sschack@timberproducts.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Stan Jackson <S.Jackson@shell.com>; Tim Boyd <[redacted]; Tom Rouleau <Tom.Rouleau@darigold.com>; Tommy Brooks <tbrooks@cablehuston.com>; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Chuck Gates [redacted]; Nancy Holbrook <Nancy.Holbrook@bp.com>; Robert Pierce <robert.pierce@shell.com>; Rusty Williams <williwk@bp.com>

Cc: John Carr <jcarr@awec.solutions>; Ed Finklea <efinklea@awec.solutions>

Subject: AWEC Natural Gas Interruption Update

Attachments: DecJanFebGJGraphs.pdf

AWEC members,

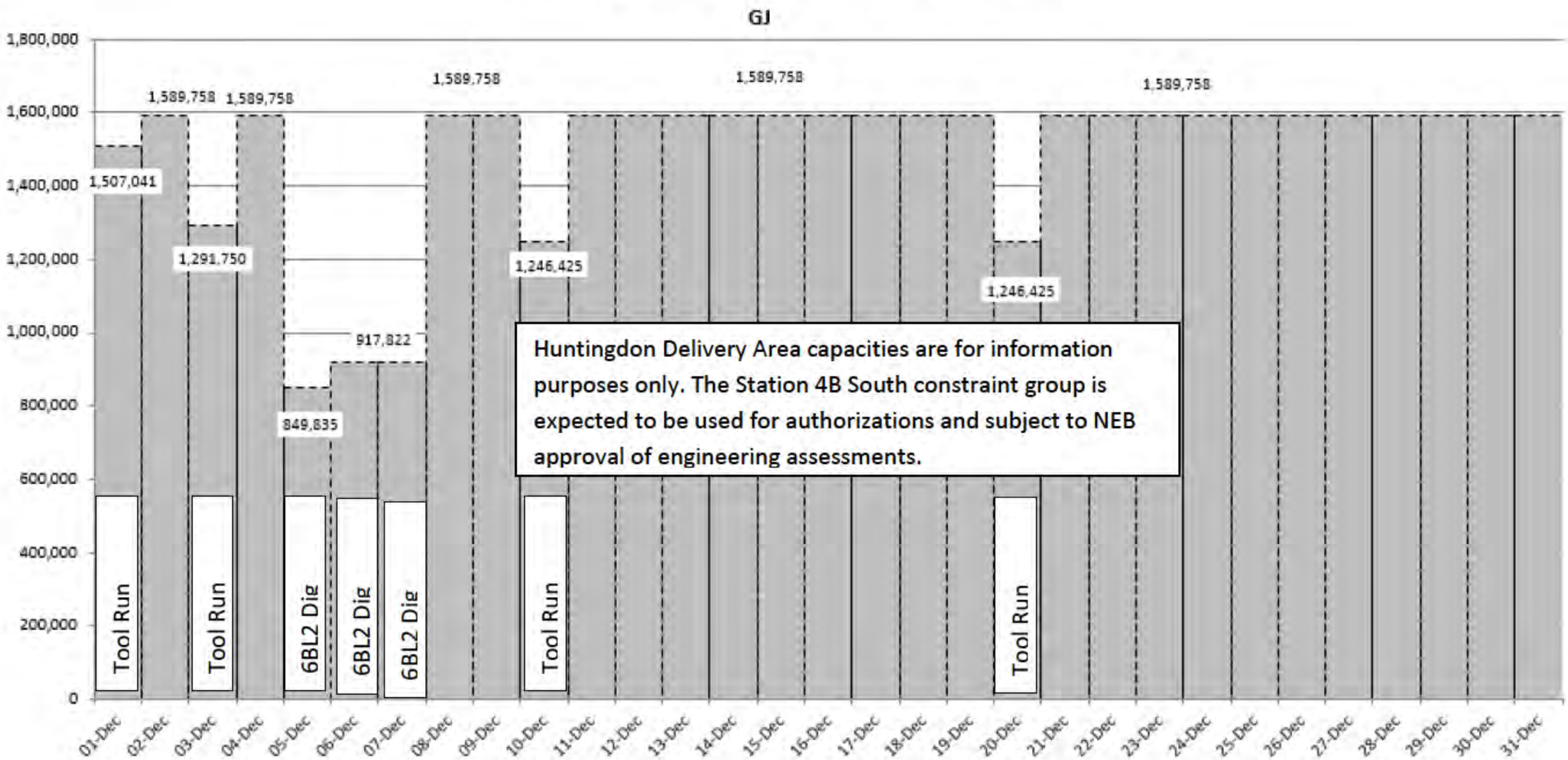
Please see the attached memo regarding an update on the Enbridge situation, from our Natural Gas Director, Ed Finklea.

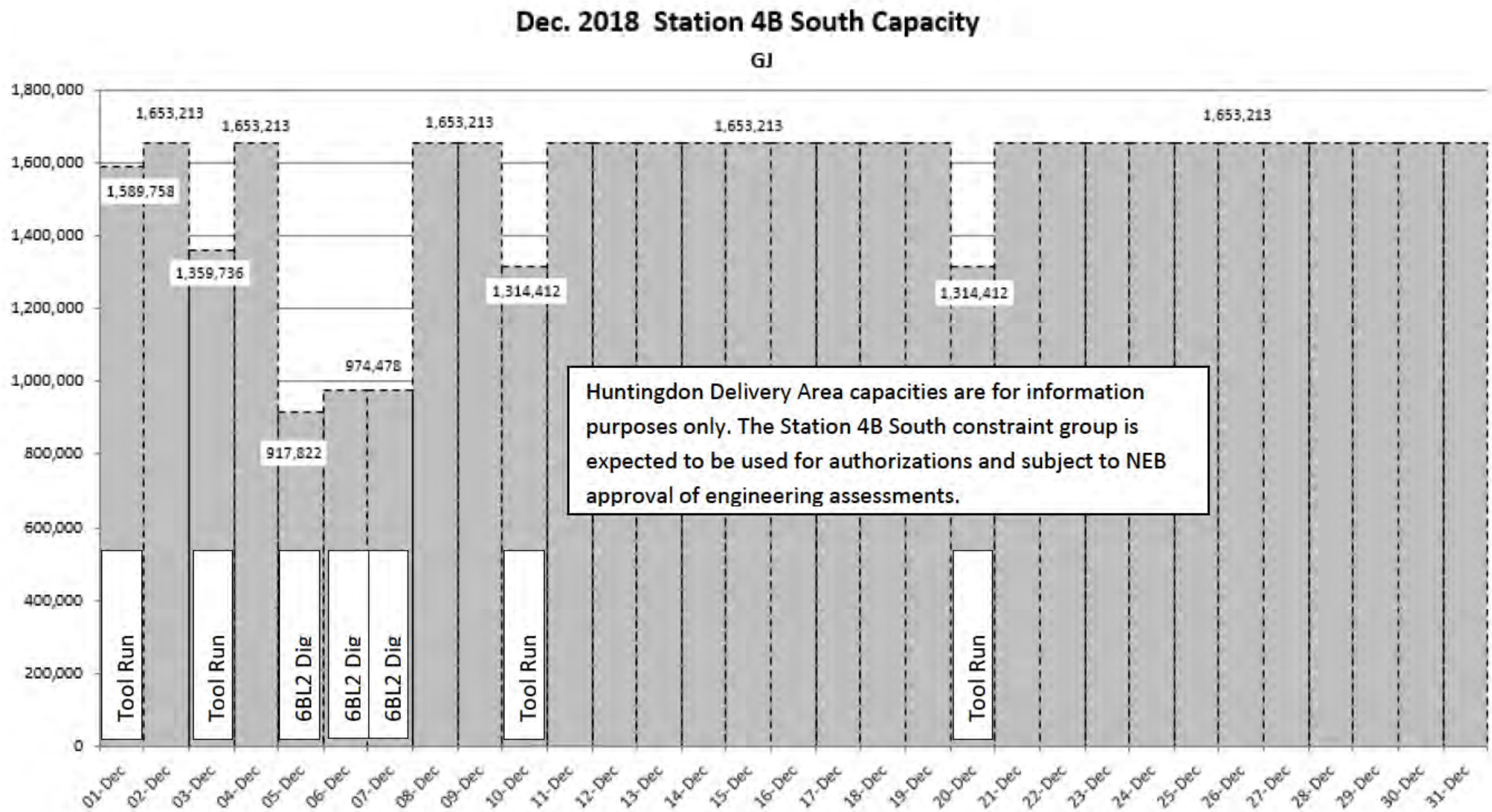
Please let him know if you have questions.

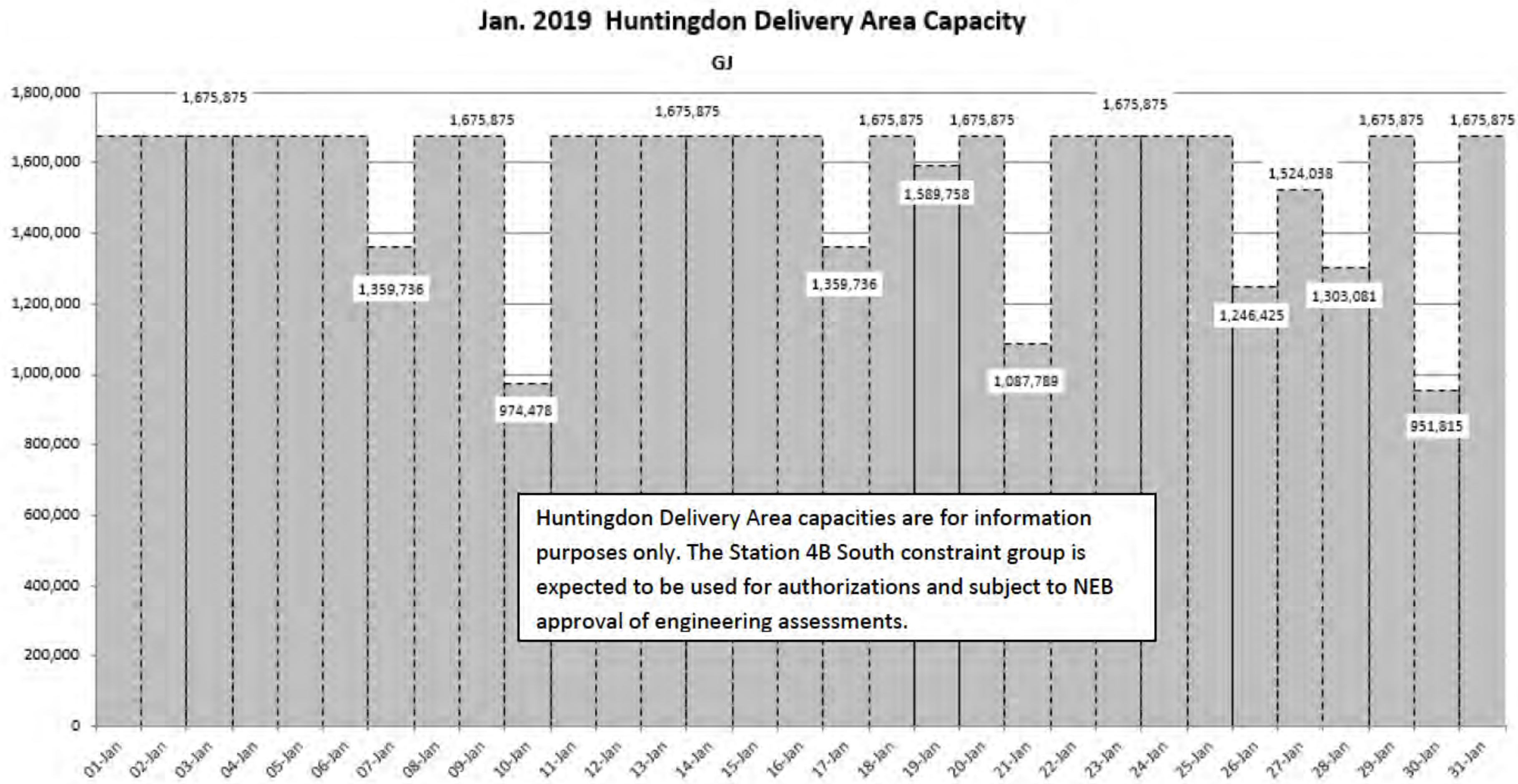
Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

DecJanFebGJGraphs_0001.pdf

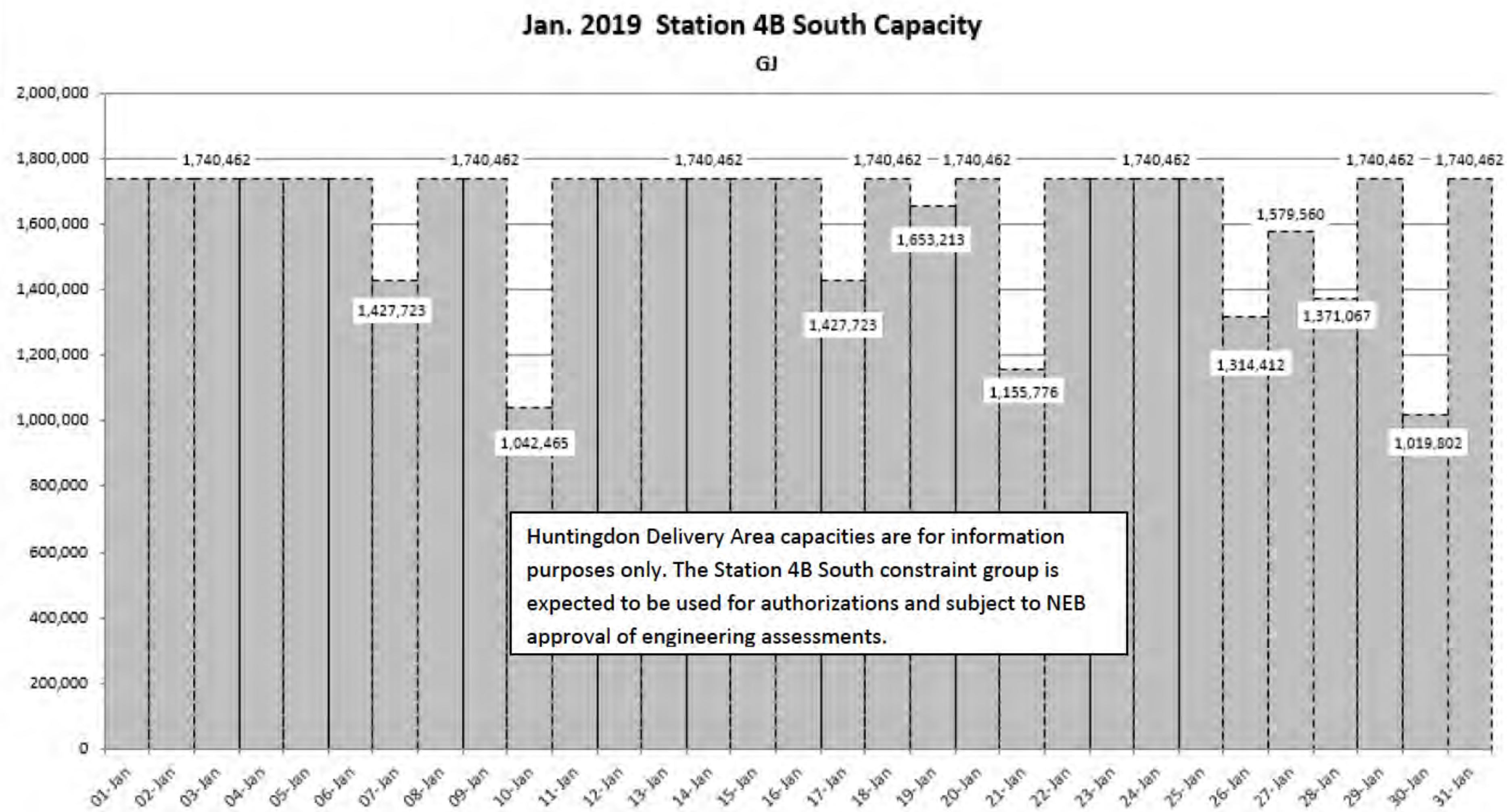
Dec. 2018 Huntingdon Delivery Area Capacity



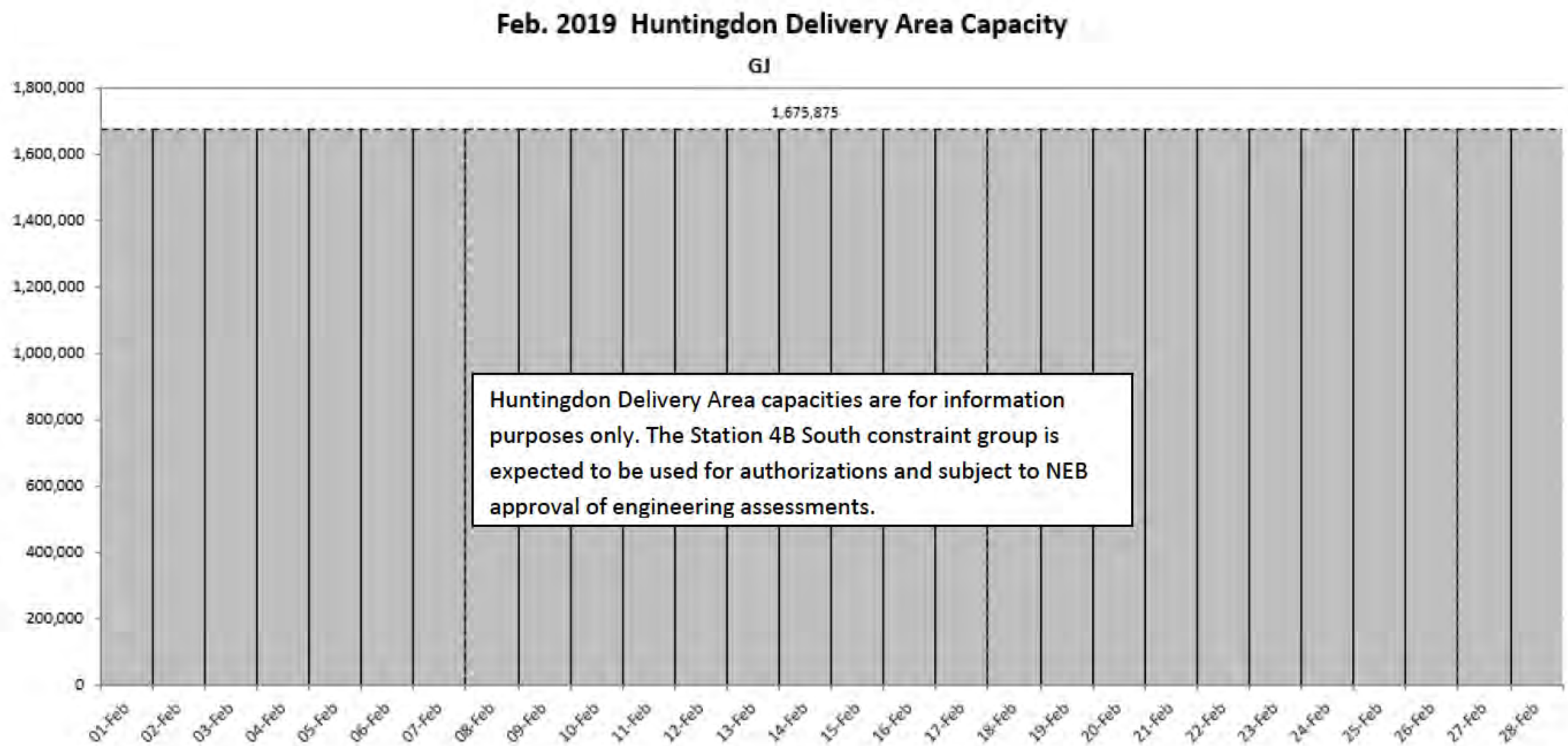

Dec. 2018 Station 4B South Capacity
GJ
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
1,653,213
1,653,213
1,653,213
1,653,213
1,653,213
1,589,758
1,359,736
1,314,412
1,314,412
974,478
917,822
Tool Run
Tool Run
6BL2 Dig
6BL2 Dig
6BL2 Dig
Tool Run
Tool Run
Huntingdon Delivery Area capacities are for information purposes only. The Station 4B South constraint group is expected to be used for authorizations and subject to NEB approval of engineering assessments.
01-Dec
02-Dec
03-Dec
04-Dec
05-Dec
06-Dec
07-Dec
08-Dec
09-Dec
10-Dec
11-Dec
12-Dec
13-Dec
14-Dec
15-Dec
16-Dec
17-Dec
18-Dec
19-Dec
20-Dec
21-Dec
22-Dec
23-Dec
24-Dec
25-Dec
26-Dec
27-Dec
28-Dec
29-Dec
30-Dec
31-Dec

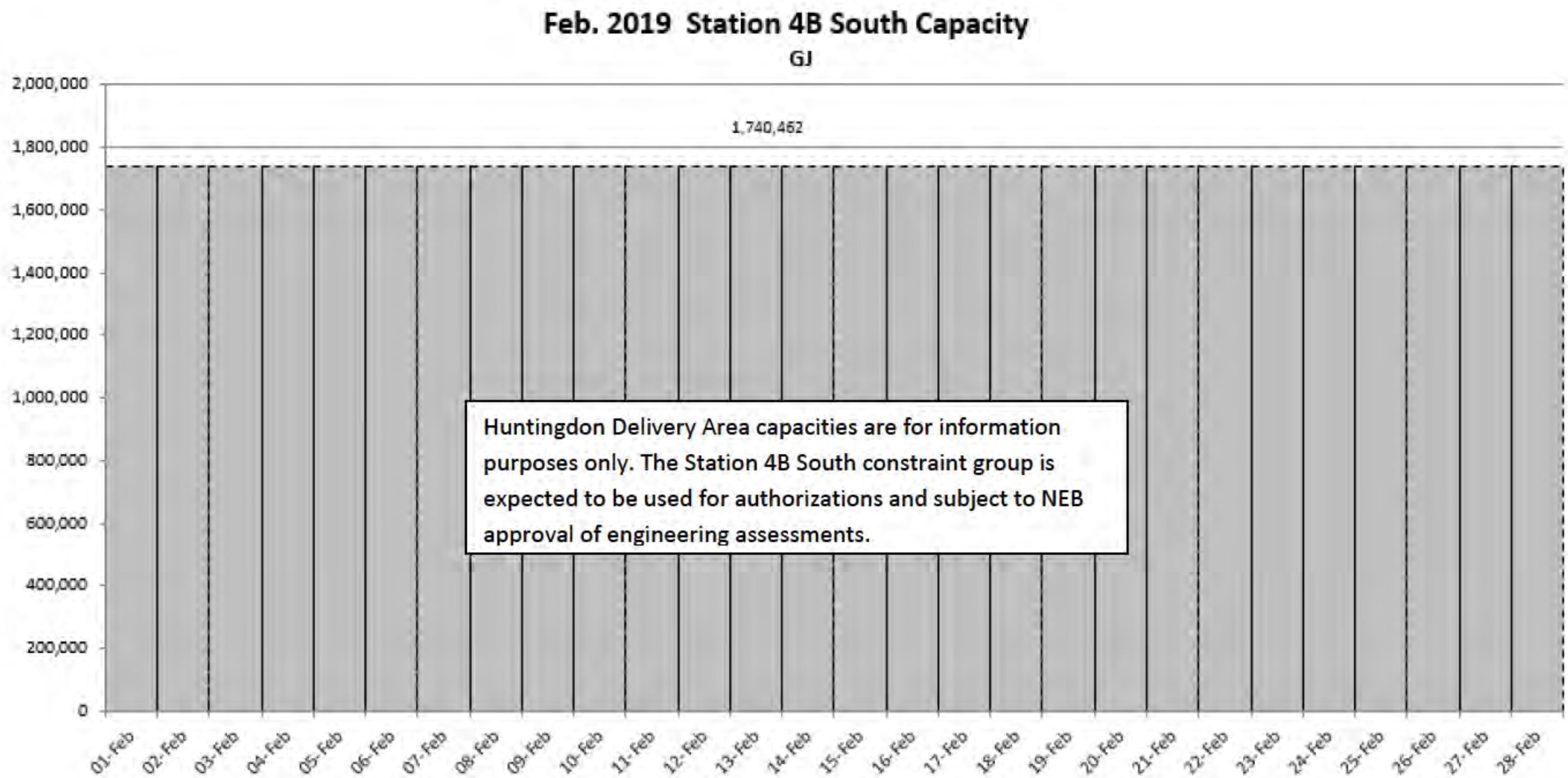


Jan. 2019 Huntingdon Delivery Area Capacity
GJ
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
1,675,875
1,359,736
974,478
1,589,758
1,087,789
1,246,425
1,524,038
1,303,081
951,815
01-Jan
02-Jan
03-Jan
04-Jan
05-Jan
06-Jan
07-Jan
08-Jan
09-Jan
10-Jan
11-Jan
12-Jan
13-Jan
14-Jan
15-Jan
16-Jan
17-Jan
18-Jan
19-Jan
20-Jan
21-Jan
22-Jan
23-Jan
24-Jan
25-Jan
26-Jan
27-Jan
28-Jan
29-Jan
30-Jan
31-Jan
Huntingdon Delivery Area capacities are for information purposes only. The Station 4B South constraint group is expected to be used for authorizations and subject to NEB approval of engineering assessments.



Jan. 2019 Station 4B South Capacity
GJ
2,000,000
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
1,740,462
1,427,723
1,042,465
1,427,723
1,653,213
1,155,776
1,579,560
1,314,412
1,371,067
1,019,802
Huntingdon Delivery Area capacities are for information purposes only. The Station 4B South constraint group is expected to be used for authorizations and subject to NEB approval of engineering assessments.
01-Jan
02-Jan
03-Jan
04-Jan
05-Jan
06-Jan
07-Jan
08-Jan
09-Jan
10-Jan
11-Jan
12-Jan
13-Jan
14-Jan
15-Jan
16-Jan
17-Jan
18-Jan
19-Jan
20-Jan
21-Jan
22-Jan
23-Jan
24-Jan
25-Jan
26-Jan
27-Jan
28-Jan
29-Jan
30-Jan
31-Jan


Feb. 2019 Huntingdon Delivery Area Capacity
GJ
1,675,875
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
Huntingdon Delivery Area capacities are for information purposes only. The Station 4B South constraint group is expected to be used for authorizations and subject to NEB approval of engineering assessments.
01-Feb
02-Feb
03-Feb
04-Feb
05-Feb
06-Feb
07-Feb
08-Feb
09-Feb
10-Feb
11-Feb
12-Feb
13-Feb
14-Feb
15-Feb
16-Feb
17-Feb
18-Feb
19-Feb
20-Feb
21-Feb
22-Feb
23-Feb
24-Feb
25-Feb
26-Feb
27-Feb
28-Feb


Feb. 2019 Station 4B South Capacity
GJ
2,000,000
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
1,740,462
Huntingdon Delivery Area capacities are for information purposes only. The Station 4B South constraint group is expected to be used for authorizations and subject to NEB approval of engineering assessments.
01-Feb
02-Feb
03-Feb
04-Feb
05-Feb
06-Feb
07-Feb
08-Feb
09-Feb
10-Feb
11-Feb
12-Feb
13-Feb
14-Feb
15-Feb
16-Feb
17-Feb
18-Feb
19-Feb
20-Feb
21-Feb
22-Feb
23-Feb
24-Feb
25-Feb
26-Feb
27-Feb
28-Feb

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 11/27/2018 10:02:37 AM

To: Aldis.Raisters@gapac.com; Hugh.O.Pierce@tsocorp.com; kwilson@legadv.com; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; mruckwardt@schn.com; Noel.Mak@ATImetals.com; Samuel.Liebelt@kapstonepaper.com; todd.wiseman@solvay.com; tom@richlandpaper.com; Aldis.Raisters@gapac.com; jeff.steed@northwesthardwoods.com; Mark_R@columbiasteel.com; Martha_C@columbiasteel.com; mike.kuhn@westrock.com; Noel.Mak@ATImetals.com; Samuel.Liebelt@kapstonepaper.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; mary.mccordic@shell.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; SteveHarper@thisisnoble.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Alex Koleber; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials com>; Bill Smith <Bill.Smith@airliquide.com>; Boz <vanhoutb@ohsu.edu>; Brad Beavers <bbeavers@timberproducts.com>; Brad Troup <Brad.L.Troup@tsocorp.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@NipponDynawave.com>; Briane Keene <BrianR.Keene@airliquide.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <WittmannConsultingLLC@outlook.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Chad Sorber <sorber@ohsu.edu>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leon <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Dan Riley <daniel.t.riley@tsocorp.com>; Dave Post <Dave.Post@wahchang.com>; David Barge <David.A.Barge@tsocorp.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Mitcheltree <DBM@EESconsulting.com>; David Tobin <DavidTobin@BoisePaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <Don.Sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@precastcorp.com>; Eric Streicher <Eric.Streicher@Airgas.com>; Ernesto M Negrete <Ernesto.M.NegretePapadakis@tsocorp.com>; Fawn Barrie <fbarrie@legadv.com>; Gary Collison <GCollison@pccstructurals.com>; Graham Bailey <graham.bailey@NipponDynawave.com>; Greg Miller <greg.miller@weyerhaeuser.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; JaDPrice <JaDPrice@gapac.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell.com>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.org>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Marty Sedler <marty.sedler@intel.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Broughton <michael.l.broughton@boeing.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@RockTenn.com>; Michael Kuhn <mkuhn@RockTenn.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.Slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@DeltaEnergyllc.com>; Nick Kaiser <Nick.Kaiser@NipponDynawave.com>; Public Affairs Counsel <pac@pacounsel.org>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <PLydon@LHS.org>; Pat Ortiz <Patrick.Ortiz@kapstonepaper.com>; Patrick Loupin <PatrickLoupin@PackagingCorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@Ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Sandi Swarthout <sswarthout@capconn.net>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <Scott.R.Hawley@tsocorp.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steve Wood <S.Wood@resolutefp.com>; Steven Castracane <steven.castracane@linde.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tony Hardenbrook; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; William McMahon <william.mcmahon@ipaper.com>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Gilmore <billmg@penwool.com>; Boz <vanhoutb@ohsu.edu>; Brian Wood <brian.wood@NipponDynawave.com>; Brian Wood <brian.wood@NipponDynawave.com>; Bruce Martin <bruce.martin@westrock.com>; Calli Daly <calli.daly@kochps.com>; Chad Sorber <sorber@ohsu.edu>; Chad Stokes <cstokes@cablehuston.com>; Charley <[redacted]>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <chris_h@columbiasteel.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; Dave Rickman <dave.rickman@kaisertwd.com>; David Clemens <David.Clemens@darigold.com>; David Hawk <[redacted]; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Dave Post <Dave.Post@wahchang.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <don.sturtevant@simplot.com>; Drew Bryck <drew.m.bryck@boeing.com>; Ed Coghlan <Ed.coghlan@onsemi.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@precastcorp.com>; Gary Collison <GCollison@pccstructurals.com>; Greg Miller <greg.miller@weyerhaeuser.com>; Greg Takisaki <Greg.takasaki@kaisertwd.com>; Jake Evans <Jake.evans@onsemi.com>; JaDPrice <JaDPrice@gapac.com>; Jared Sommer <sommerj@byui.edu>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jennifer <jenny@pacounsel.org>; Jim Duke <jduke@idahoan.com>; JL Wilson <jlwilson@pacounsel.org>; Joe Burrell <Joseph.g.burrell@jci.com>; John Carr <jcarr@awec.solutions>; John Latimer <john.latimer@shell.com>; Justen Rainey <justenr@pacounsel.org>; Keith Warner <keith.c.warner@boeing.com>; Kristine Dippold <Kristine.A.Dippold@boeing.com>; Kyle Williams <williamsk@byui.edu>; Laura Jane Schaefer <schaefel@ohsu.edu>; Mark Dunn <mark.dunn@simplot.com>; Mark Steele <steele@norpac.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Michael Broughton <michael.l.broughton@boeing.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Mike Hale <Michael.Hale@simplot.com>; Nick Avenetti <nick@perlite.com>; Kaiser, Nick <Nick.Kaiser@NipponDynawave.com>; Pat Lydon

<PLydon@LHS.org>; Pat Ortiz <Patrick.Ortiz@kapstonepaper.com>; Phil Foss <phil.foss@onsemi.com>; Phil Zirngibl <Pzirngi@gapac.com>; Rick Stricker <rstricker@baf.com>; Sarah Schack <sschack@timberproducts.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Stan Jackson <S.Jackson@shell.com>; Tim Boyd <[redacted] ; Tom Rouleau <Tom.Rouleau@darigold.com>; Tommy Brooks <tbrooks@cablehuston.com>; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Chuck Gates [redacted] ; Nancy Holbrook <Nancy.Holbrook@bp.com>; Robert Pierce <robert.pierce@shell.com>; Rusty Williams <williwk@bp.com>

Cc: John Carr <jcarr@awec.solutions>; Ed Finklea <efinklea@awec.solutions>

Subject: AWEC Natural Gas Interruption Update

Attachments: DecJanFebGJGraphs.pdf

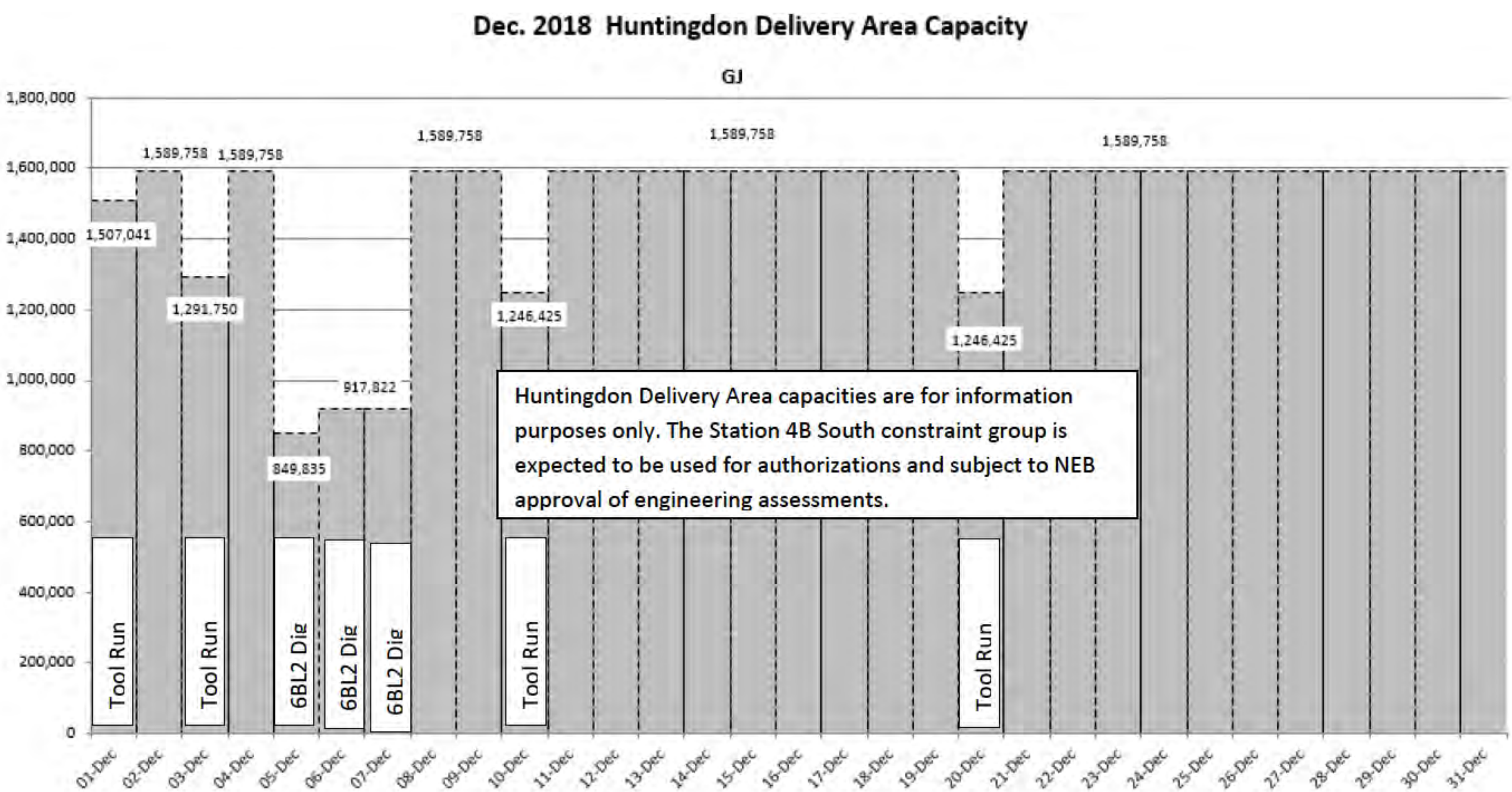
AWEC members,

Regarding the gas outage, Enbridge updated its capacity estimates for Station 4B and Huntingdon. It appears that if we get through the digs scheduled for next week that the worst may be behind us. Please see the attached charts they provided for you to check out . The following caveats were included:

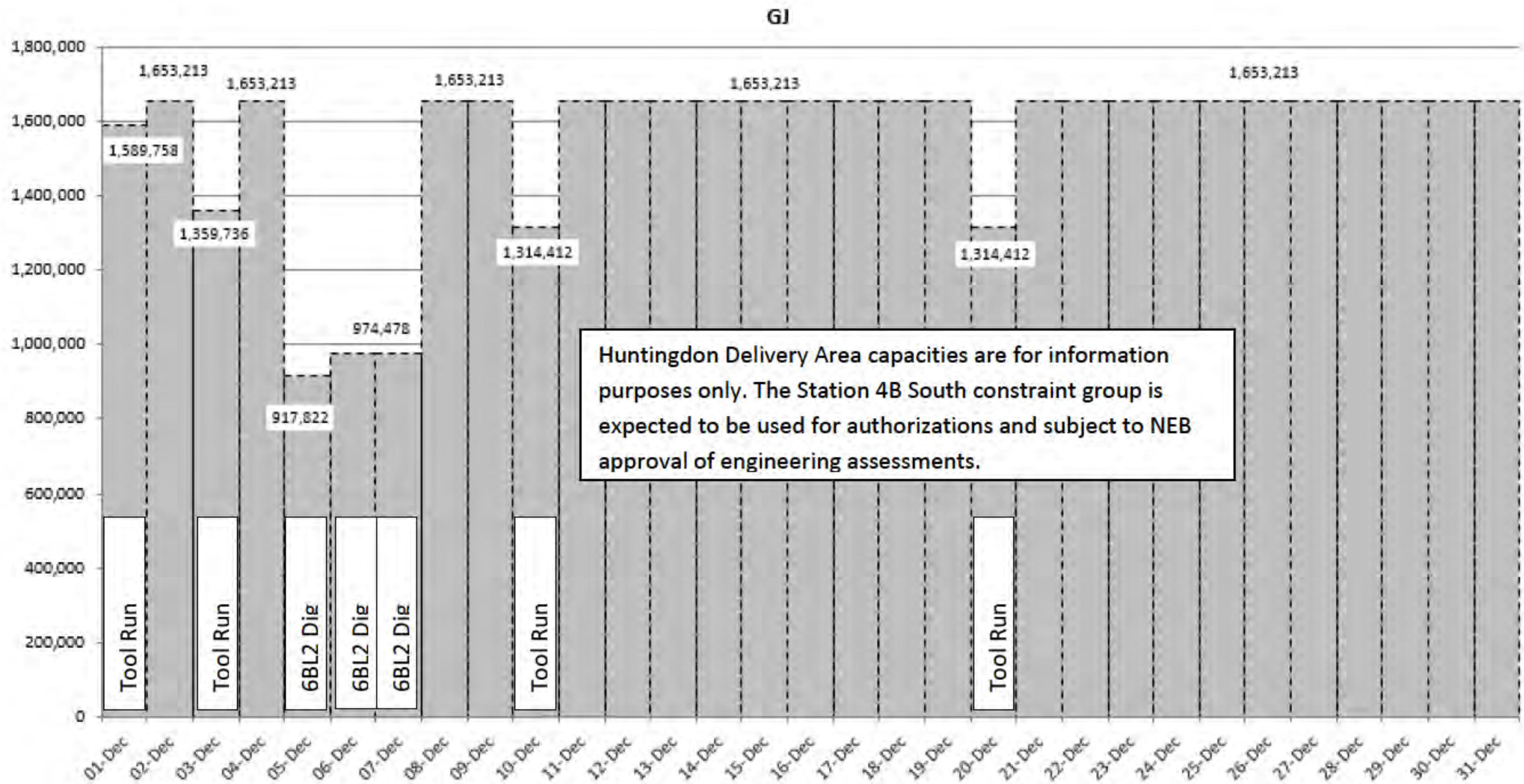
1. The capacities presented are estimates and will be adjusted as new information becomes available.
2. The estimated capacities presented are subject to NEB approval of the engineering assessments as described in notice #51100 (November 17, 2018).
3. The estimated capacities reflect Enbridge's current dig and inline inspection plan required to complete rigorous and comprehensive engineering assessments on our T-South system prior to restoring the system to 100% of normal operating pressure on a segment by segment basis. Note that Enbridge may adjust the timing of planned digs and inline inspections should weather conditions dictate.
4. Upon approval of the engineering assessment on the 9L2 segment as described in notice #51100 (November 17, 2018), the Station 4B South constraint group is expected to be used to authorize gas. The Huntingdon Delivery Area capacities are estimates only and will be dependent on BC Interior deliveries and Kingsvale receipts.

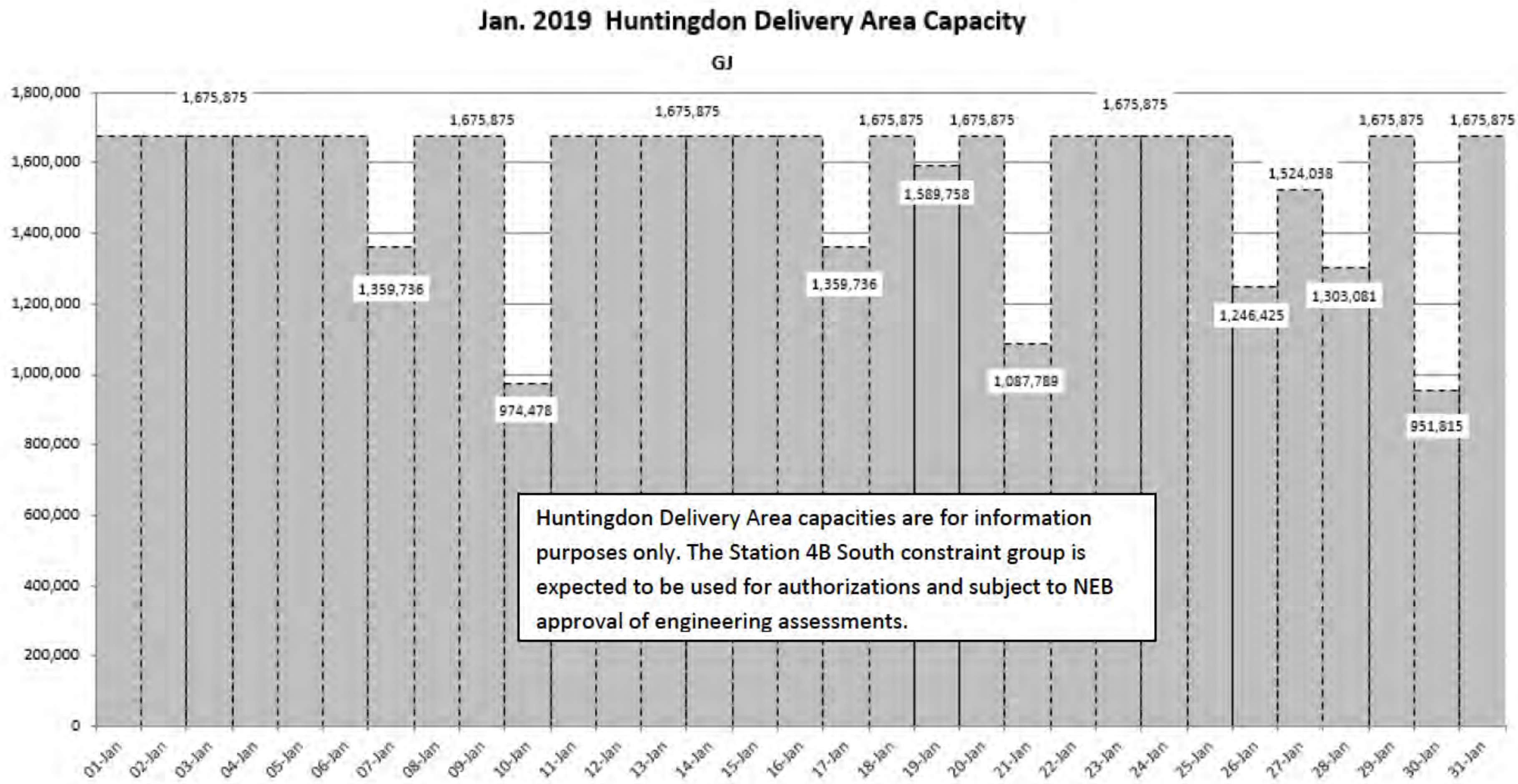
Please let him know if you have questions.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

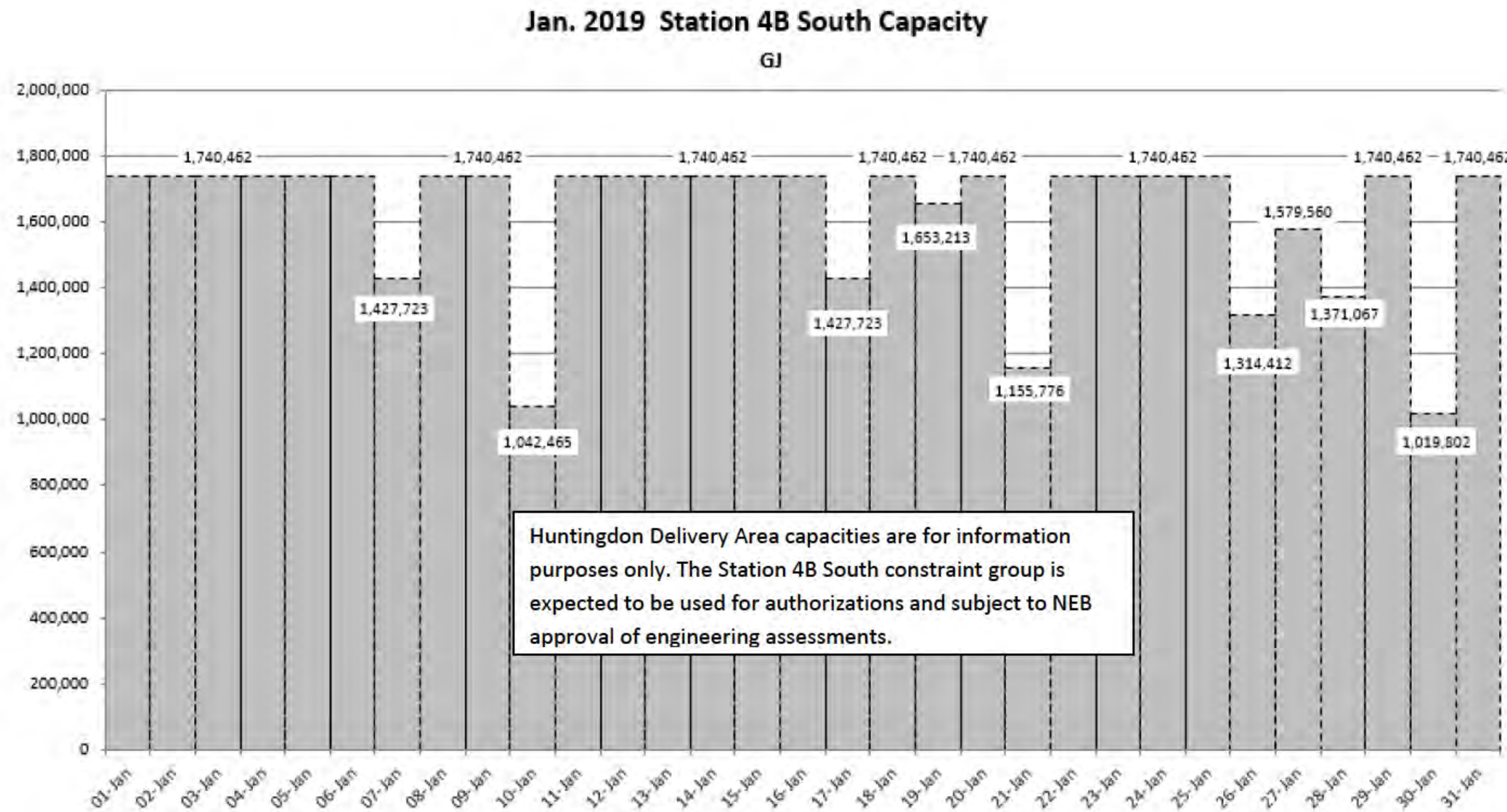

Dec. 2018 Huntingdon Delivery Area Capacity
GJ
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
1,589,758
1,589,758
1,589,758
1,589,758
1,589,758
1,507,041
1,291,750
1,246,425
1,246,425
917,822
849,835
Tool Run
Tool Run
6BL2 Dig
6BL2 Dig
6BL2 Dig
Tool Run
Tool Run
Huntingdon Delivery Area capacities are for information purposes only. The Station 4B South constraint group is expected to be used for authorizations and subject to NEB approval of engineering assessments.
01-Dec
02-Dec
03-Dec
04-Dec
05-Dec
06-Dec
07-Dec
08-Dec
09-Dec
10-Dec
11-Dec
12-Dec
13-Dec
14-Dec
15-Dec
16-Dec
17-Dec
18-Dec
19-Dec
20-Dec
21-Dec
22-Dec
23-Dec
24-Dec
25-Dec
26-Dec
27-Dec
28-Dec
29-Dec
30-Dec
31-Dec

Dec. 2018 Station 4B South Capacity

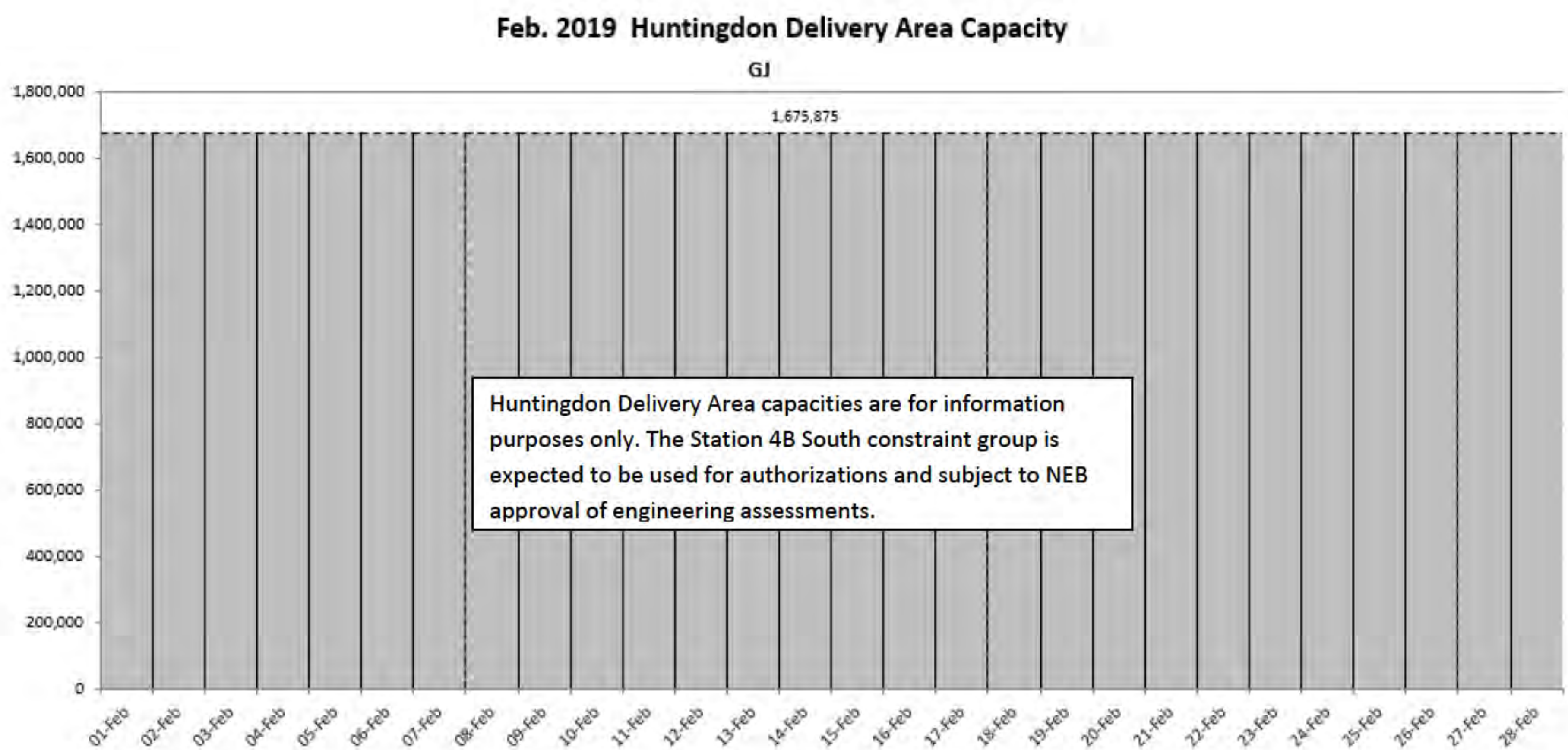


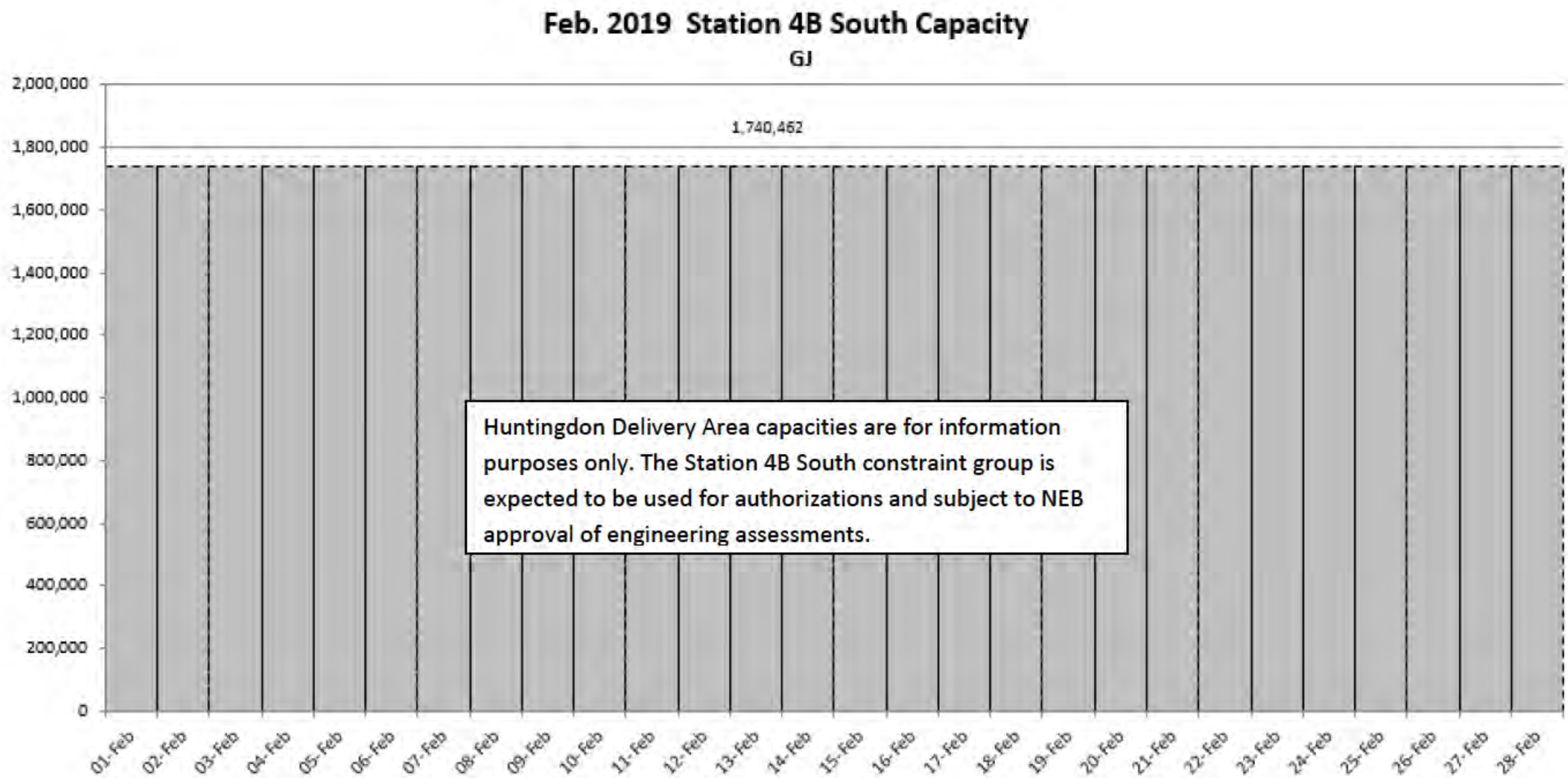


Jan. 2019 Huntingdon Delivery Area Capacity
GJ
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
1,675,875
1,359,736
974,478
1,359,736
1,589,758
1,087,789
1,246,425
1,524,038
1,303,081
951,815
01-Jan
02-Jan
03-Jan
04-Jan
05-Jan
06-Jan
07-Jan
08-Jan
09-Jan
10-Jan
11-Jan
12-Jan
13-Jan
14-Jan
15-Jan
16-Jan
17-Jan
18-Jan
19-Jan
20-Jan
21-Jan
22-Jan
23-Jan
24-Jan
25-Jan
26-Jan
27-Jan
28-Jan
29-Jan
30-Jan
31-Jan
Huntingdon Delivery Area capacities are for information purposes only. The Station 4B South constraint group is expected to be used for authorizations and subject to NEB approval of engineering assessments.



Jan. 2019 Station 4B South Capacity
GJ
2,000,000
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
1,740,462
1,740,462
1,740,462
1,740,462
1,740,462
1,740,462
1,740,462
1,740,462
1,427,723
1,042,465
1,427,723
1,653,213
1,155,776
1,579,560
1,314,412
1,371,067
1,019,802
Huntingdon Delivery Area capacities are for information purposes only. The Station 4B South constraint group is expected to be used for authorizations and subject to NEB approval of engineering assessments.
01-Jan
02-Jan
03-Jan
04-Jan
05-Jan
06-Jan
07-Jan
08-Jan
09-Jan
10-Jan
11-Jan
12-Jan
13-Jan
14-Jan
15-Jan
16-Jan
17-Jan
18-Jan
19-Jan
20-Jan
21-Jan
22-Jan
23-Jan
24-Jan
25-Jan
26-Jan
27-Jan
28-Jan
29-Jan
30-Jan
31-Jan


Feb. 2019 Huntingdon Delivery Area Capacity
GJ
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
1,675,875
Huntingdon Delivery Area capacities are for information purposes only. The Station 4B South constraint group is expected to be used for authorizations and subject to NEB approval of engineering assessments.
01-Feb
02-Feb
03-Feb
04-Feb
05-Feb
06-Feb
07-Feb
08-Feb
09-Feb
10-Feb
11-Feb
12-Feb
13-Feb
14-Feb
15-Feb
16-Feb
17-Feb
18-Feb
19-Feb
20-Feb
21-Feb
22-Feb
23-Feb
24-Feb
25-Feb
26-Feb
27-Feb
28-Feb


Feb. 2019 Station 4B South Capacity
GJ
2,000,000
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
1,740,462
Huntingdon Delivery Area capacities are for information purposes only. The Station 4B South constraint group is expected to be used for authorizations and subject to NEB approval of engineering assessments.
01-Feb
02-Feb
03-Feb
04-Feb
05-Feb
06-Feb
07-Feb
08-Feb
09-Feb
10-Feb
11-Feb
12-Feb
13-Feb
14-Feb
15-Feb
16-Feb
17-Feb
18-Feb
19-Feb
20-Feb
21-Feb
22-Feb
23-Feb
24-Feb
25-Feb
26-Feb
27-Feb
28-Feb

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 11/30/2018 01:29:45 PM

To: Hugh.O.Pierce@tsocorp.com; kwilson@legadv.com; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; mruckwardt@schn.com; Noel.Mak@ATImetals.com; Samuel.Liebelt@kapstonepaper.com; todd.wiseman@solvay.com; tom@richlandpaper.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas com; James_Clarken@oxy.com; jpino@uetllc.com; mary.mccordic@shell.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; SteveHarper@thisisnoble.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Aldis Raisters@GAPAC.com; Alex Koleber; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials com>; Bill Smith <Bill.Smith@airliquide.com>; Boz <vanhoutb@ohsu.edu>; Brad Beavers <bbeavers@timberproducts.com>; Brad Troup <Brad.L.Troup@tsocorp.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@NipponDynawave.com>; Briane Keene <BrianR.Keene@airliquide.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <WittmannConsultingLLC@outlook.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Chad Sorber <sorber@ohsu.edu>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leon <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Dan Riley <daniel.t.riley@tsocorp.com>; Dave Post <Dave.Post@wahchang.com>; David Barge <David.A.Barge@tsocorp.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Mitcheltree <DBM@EESconsulting.com>; David Tobin <DavidTobin@BoisePaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <Don.Sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@precastcorp.com>; Eric Streicher <Eric.Streicher@Airgas.com>; Ernesto M Negrete <Ernesto.M.NegretePapadakis@tsocorp.com>; Fawn Barrie <fbarrie@legadv.com>; Gary Collison <GCollison@pccstructurals.com>; Graham Bailey <graham.bailey@NipponDynawave.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; JaDPrice <JaDPrice@GAPAC.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell.com>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Karen Vaughn <Karen.Vaughn@GAPAC.com>; Keith Warner <keith.c.warner@boeing.com>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@GAPAC.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.org>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Marty Sedler <marty.sedler@intel.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Broughton <michael.l.broughton@boeing.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@RockTenn.com>; Michael Kuhn <mkuhn@RockTenn.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.Slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@DeltaEnergyllc.com>; Nick Kaiser <Nick.Kaiser@NipponDynawave.com>; Public Affairs Counsel <pac@pacounsel.org>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <PLydon@LHS.org>; Pat Ortiz <Patrick.Ortiz@kapstonepaper.com>; Patrick Loupin <PatrickLoupin@PackagingCorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@GAPAC.com>; Ralph Saperstein <Ralph@Ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Sandi Swarthout <sswarthout@capconn.net>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <Scott.R.Hawley@tsocorp.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steve Wood <S.Wood@resolutefp.com>; Steven Castracane <steven.castracane@linde.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tony Hardenbrook; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@GAPAC.com>; William McMahon <william.mcmahon@ipaper.com>; Bill Gilmore <billmg@penwool.com>; Chad Stokes <cstokes@cablehuston.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Ed Coghlan <Ed.coghlan@onsemi.com>; Ed Finklea <efinklea@awec.solutions>; Jake Evans <Jake.evans@onsemi.com>; Jared Sommer <sommerj@byui.edu>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kyle Williams <williamsk@byui edu>; Nancy Holbrook <Nancy.Richardson@bp.com>; Nick Avenetti <nick@perlite.com>; Phil Foss <phil.foss@onsemi.com>; Rick Stricker <rstricker@baf.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Sharon Andersen <Sharon.w.anderson@intel.com>; Steve O'Brien <sobrien@baf.com>; Tommy Brooks <tbrooks@cablehuston.com>; Tony Hardenbrook; Tyler C. Pepple <tcp@dvclaw.com>; Chuck Gates [redacted]; Nancy Holbrook <Nancy.Holbrook@bp.com>; Robert Pierce <robert.pierce@shell.com>; Rusty Williams <williwk@bp.com>

Cc: John Carr <jcarr@awec.solutions>; Ed Finklea <efinklea@awec.solutions>

Subject: Update on Enbridge Pipeline Eruption - CORRECTION

Attachments: AWEC Update on Natural Gas Service Disruption Nov 30 2018.docx

---

AWEC members,

Please not that there is a correction in the memo. The memo uses MMBtus to refer to deliveries at Sumas. The deliveries are actually reported in gigajoules (GJs) not MMBtus. There is a slight conversion and less MMBtus are the result.

So 1.4 Billion GJ = 1.327 Billion MMBTus

1.7 Billion GJ = 1.61Billion MMBTus

Please see the number highlighted in yellow in the memo.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

AWEC
Alliance of Western Energy Consumers ◆ 818 SW 3rd Avenue, #266 ◆ Portland, OR 97204 ◆ 971-544-7169 ◆ AWEC.solutions

Memorandum:

To: Alliance of Western Energy Consumer Members

From: Ed Finklea

Re: Natural Gas Service on Northwest Pipeline – Update

Date: November 30, 2018

The following is an update on the integrity work being done by Enbridge and its expected impacts on deliveries at Sumas in the coming week. Work was done this week that is expected to bring deliveries at Sumas up to approximately 1.327 billion GJ per day by December 1, 2018. However, integrity work is scheduled by Enbridge to be performed December 5th through 7th that would bring pressures down and reduce deliveries to 850 to 900 million. (For reference, winter deliveries are normally 1.61 billion GJ per day). If that integrity work is performed without discovering additional issues, then deliveries at Sumas should be able to be at 1.327 billion GJ per day for the balance of December.

There is however a cold front forecasted for the middle of next week that could hit when the reduction in pressure is scheduled. Fortis BC Energy, the Vancouver BC local distribution company, and Northwest Pipeline, had a conference call with Enbridge yesterday. They have requested that Enbridge move the integrity work to next weekend to avoid the confluence of lower pressure on the pipe and colder weather, which could dramatically impact Sumas day prices. Enbridge is still considering that request, as apparently there are labor issues associated with working over the weekend. I will keep you informed when we learn the outcome of this request. Any decision would be posted on Enbridge's bulletin board. Calls directly to Enbridge from members being impacted by high Sumas prices may be appropriate.

Northwest Pipeline officials have told me if the integrity work is completed without discovering additional safety concerns, its system should be close to normal if the 1.327 billion GJ per day deliveries can be sustained. The worst of the pricing issues may be behind the region if deliveries stay in that range and the region doesn't experience extreme cold weather. I am in regular contact with Northwest Pipeline and the region's LDCs to convey the urgency of the matter for our region's energy intensive businesses.

Regards,

Ed Finklea
AWEC Natural Gas Director

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 11/30/2018 10:14:51 AM

To: Aldis.Raisters@gapac.com; Hugh.O.Pierce@tsocorp.com; kwilson@legadv.com; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; mruckwardt@schn.com; Noel.Mak@ATImetals.com; Samuel.Liebelt@kapstonepaper.com; todd.wiseman@solvay.com; tom@richlandpaper.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; mary.mccordic@shell.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; SteveHarper@thisisnoble.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Alex Koleber; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials com>; Bill Smith <Bill.Smith@airliquide.com>; Boz <vanhoutb@ohsu.edu>; Brad Beavers <bbeavers@timberproducts.com>; Brad Troup <Brad.L.Troup@tsocorp.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@NipponDynawave.com>; Briane Keene <BrianR.Keene@airliquide.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <WittmannConsultingLLC@outlook.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Chad Sorber <sorber@ohsu.edu>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leon <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Dan Riley <daniel.t.riley@tsocorp.com>; Dave Post <Dave.Post@wahchang.com>; David Barge <David.A.Barge@tsocorp.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Mitcheltree <DBM@EESconsulting.com>; David Tobin <DavidTobin@BoisePaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <Don.Sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@precastcorp.com>; Eric Streicher <Eric.Streicher@Airgas.com>; Ernesto M Negrete <Ernesto.M.NegretePapadakis@tsocorp.com>; Fawn Barrie <fbarrie@legadv.com>; Gary Collison <GCollison@pccstructurals.com>; Graham Bailey <graham.bailey@NipponDynawave.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; JaDPrice <JaDPrice@gapac.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell.com>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.org>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Marty Sedler <marty.sedler@intel.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Broughton <michael.l.broughton@boeing.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@RockTenn.com>; Michael Kuhn <mkuhn@RockTenn.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.Slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@DeltaEnergyllc.com>; Nick Kaiser <Nick.Kaiser@NipponDynawave.com>; Public Affairs Counsel <pac@pacounsel.org>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <PLydon@LHS.org>; Pat Ortiz <Patrick.Ortiz@kapstonepaper.com>; Patrick Loupin <PatrickLoupin@PackagingCorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@Ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Sandi Swarthout <sswarthout@capconn.net>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <Scott.R.Hawley@tsocorp.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steve Wood <S.Wood@resolutefp.com>; Steven Castracane <steven.castracane@linde.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tony Hardenbrook; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; William McMahon <william.mcmahon@ipaper.com>; Bill Gilmore <billmg@penwool.com>; Chad Stokes <cstokes@cablehuston.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Ed Coghlan <Ed.coghlan@onsemi.com>; Ed Finklea <efinklea@awec.solutions>; Jake Evans <Jake.evans@onsemi.com>; Jared Sommer <sommerj@byui.edu>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kyle Williams <williamsk@byui edu>; Nancy Holbrook <Nancy.Richardson@bp.com>; Nick Avenetti <nick@perlite.com>; Phil Foss <phil.foss@onsemi.com>; Rick Stricker <rstricker@baf.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Sharon Andersen <Sharon.w.anderson@intel.com>; Steve O'Brien <sobrien@baf.com>; Tommy Brooks <tbrooks@cablehuston.com>; Tony Hardenbrook; Tyler C. Pepple <tcp@dvclaw.com>; Chuck Gates [redacted] Nancy Holbrook <Nancy.Holbrook@bp.com>; Robert Pierce <robert.pierce@shell.com>; Rusty Williams <williwk@bp.com>

Subject: AWEC November 2018 Newsletter

Attachments: AWEC November 2018 Newsletter.pdf

AWEC members,

Please find attached the November newsletter for the Alliance of Western Energy Consumers.

Kelly Francone
Senior Consultant
Energy Strategies

215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

Alliance of Western Energy Consumers
Monthly Energy Update

Federal Study Warns of Climate Change Impact on U.S. Economy
Page 7

For information, contact AWEC at 971.544.7169

IN THIS ISSUE:

November 2018

Bipartisan US House Bill Would Impose Carbon Fee on Fossil Fuels

An "upstream" carbon emissions fee would be levied on coal and other fossil fuels starting in 2019 under a new bill drafted in the U.S. House of Representatives.

The legislation, which is the first bipartisan climate bill from Congress in nearly a decade, is projected to cut U.S. carbon emissions by 33% in 10 years and 90% by 2050 compared with 2015 levels, according to a fact sheet on the proposal.

The bill, entitled the Energy Innovation and Carbon Dividend Act, was released late Nov. 27 by Democratic U.S. Reps. Ted Deutch and Charlie Crist of Florida and John Delaney of Maryland, as well as Republican Reps. Francis Rooney of Florida and Brian Fitzpatrick of Pennsylvania. Deutch is a co-founder of the House's embattled Climate Solutions Caucus, the Republican co-founder of which, Rep. Carlos Curbelo of Florida, lost his reelection bid in the Nov. 6 midterm elections along with several other GOP caucus members.

"With the introduction of this bill, we are taking a monumental step forward in showing our colleagues and the country that there is a bipartisan solution to climate change," Deutch said during a Nov. 27 press call.

The current Congress ends in late December, meaning the bill would need to be re-introduced in the 116th Congress beginning in early January. But the proposal's sponsors said the need for action on climate change is urgent, and the legislation could show how both parties can work together on the issue as Congress is set to be split between a Democrat-controlled House and GOP-majority Senate in 2019.

"As we head into a more bipartisan Congress… there is a bipartisan way forward on this issue," Deutch said at an early Nov. 28 press conference on the legislation.

The bill's carbon fee would start at \$15/tonne of CO_2 equivalent for calendar year 2019 and rise by \$10/tonne each year thereafter. The fee would be imposed on fuel sales from entities such as oil refiners, petroleum product importers, coal producers and natural gas shippers based on the carbon content of the fuel they supply. The legislation would also place a tariff on imported fossil fuels and carbon-intensive products if the country of origin does not price carbon, while providing credits or refunds to exported fuels and carbon-intensive products required to pay the upstream fee.

(Continued on Page 2)

(Continued from Page 1)

All net revenues would go to American households in the form of a "dividend" to offset cost increases associated with the proposal.

In exchange for imposing a carbon fee, the bill would prevent the U.S. Environmental Protection Agency from enforcing rules under the Clean Air Act to limit greenhouse gas emissions from the combustion of fuels covered by the legislation.

But that regulatory authority would be restored if the bill's emissions targets are not achieved within 10 years. The House proposal would also not affect vehicle fuel efficiency standards and rules to control methane, mercury and particulate matter.

Emissions targets for Energy Innovation and Carbon Dividend Act

Year	Emission reduction target
2015	Reference year
2018 to 2021	No emissions reduction target
2022 to 2030	5% of 2015 emissions per year
2030 to 2040	2.5% of 2015 emissions per year
2040 to 2050	1.5% of 2015 emissions per year

Source: U.S. House of Representatives

The bill's emissions reduction targets begin in 2022, when the proposal aims for greenhouse gas output from fuels covered under the bill to decline by 5% of the 2015 total. Emissions targets for later years would equal the previous year's target minus a percentage of emissions during the 2015 reference year.

Democrats, who will take control of the House in early January, have said they want to prioritize action on climate change. But the U.S. Senate, which will stay in GOP hands, is unlikely to pass legislation that would put a price on carbon emissions.

President Donald Trump has worked over the past two years to overturn many climate rules from the EPA and dismissed a new report produced by 13 federal agencies under his administration that warned of significant economic impacts from climate change.

Gov. Inslee To Unveil Proposals in 2019 on Climate Change

Governor Jay Inslee has no plans to slow down on climate change issues in 2019 and stated that global warming is an "assault" that will have a significant impact on Washington State and its population.

Inslee plans to unveil a suite of proposals in December to address climate change in Washington and commented that the recently-issued federal climate report indicates there will be significant dire impacts on the nation's economy, its population, farming, etc, and they would be permanent.

Inslee said the proposals will contain legislative and executive action, but did not provide specific details about the proposals.

The Federal Climate Report includes a chapter on the Northwest, stating that it can expect more drought, extreme rain events, the loss of one-quarter of salmon habitat, as well as damaging the snow-based recreation by 70%, and possibly pushing premium wine production out of the

Agriculture is expected to be negatively impacted, reducing apples production, which is so core to Washington's economy and identity, with more wildfires, landslides, flooding, and hot temperatures projected. The report noted that even some diseases are expected to increase.

"It's crucial to decarbonize our economy," Inslee said, but even in an "environmentally friendly" state like Washington, that has not been a simple process.

In 2018, the Washington Legislature failed to pass Inslee's proposals on cap-and-trade emissions or to put a tax on carbon under Initiative 1631. The initiative passed in only three counties: King, Jefferson and San Juan. Overall, I-1631 was opposed by 56.5% statewide. Washington voters also opposed two initiatives that would have put a fee or tax on carbon.

(Continued on Page 3)

(Continued from Page 2)

The State of Oregon also failed to pass a cap-and –trade program in 2018. However, a new joint committee was announced after the session to look at carbon issues and design a proposed cap-and-trade proposal for 2019.

Inslee is required to release his 2019 budget in December. It's expected he will also release some kind of carbon pricing, be it under a cap-and-trade program or placing a tax on carbon, at that same time.

OR and WA Governors Support A Single National Power Grid

A bipartisan group of 18 governors, including Oregon Governor Kate Brown and Washington Governor Jay Inslee, proposes that the federal government take a serious look at combining the three main U.S. power grids, comparing the importance of grid modernization to the creation of the interstate highway system 60 years ago.

The idea the governors are pushing is that by improving connections at the seams between the eastern, western and Texas-based grids to energy to be shared between grids would make the nation's overall electrical power system "more resilient, efficient, reliable, competitive, and less vulnerable to cyber-attack."

In a letter last week, the Governors' Wind & Solar Energy Coalition urged the head of the Federal Energy Regulatory Commission (FERC) to begin a discussion with states, regional transmission organizations, Congress and businesses about unifying the nation's power grids.

"Modernizing the nation's electrical transmission and distribution system is as important to our states' economic development today as creating the nation's interstate highway system was 60 years ago," the governors wrote.

"It is nearly impossible to transmit electricity among the nation's three major grids — Eastern Interconnection, Western Interconnection, and Electric Reliability Council of Texas. As a result, very little electricity moves among these regions, further weakening the reliability of the nation's overall transmission system."

The coalition of governors is keying off a National Renewable Energy Laboratory study, presented at a conference in July, that concluded a single American electric grid would make energy delivery significantly cheaper and could extend the reach of cleaner electricity sources, such as wind and solar.

One scenario the study contemplates would see three large high-voltage direct-current, or HVDC, lines built from the West Coast to the Mississippi River — stitching together the "seam" between grids that roughly follow the Rocky Mountains — with a spur running south into Florida. Many of the long-haul transmission lines could run along interstate highway corridors.

Solar power generated in the deserts of the Southwest or wind power generated in the Great Plains could be sent to other parts of the country for consumption and power from East Coast offshore wind farms could be transferred across the country when the sun and demand for power go down in the east, according to the study.

"Energy policymakers in Washington and across the country should pay attention," former FERC Chairman Jim Hoecker, who serves as counsel to a group that lobbies for electric grid expansion, said in a statement in August.

"This so-called 'Seams Study' is a roadmap for tying together our disconnected and isolated electricity markets and domestic energy resources with high voltage transmission. It shines a bright light on this critical but often-ignored aspect of our national infrastructure."

A study conducted by an Iowa State University economist found that the east-west HVDC overlay transmission would, over 15 years, result in more than 280,000 megawatts of new wind capacity, more than 121,000 megawatts of new solar capacity, almost

(Continued on Page 4)

(Continued from Page 3)

megawatts of new natural gas-fueled capacity, and more than $40 billion in investment to the transmission system.

The same study concluded that linking the nation's grids would also result in the retirement of almost 209,000 megawatts of generation capacity by 2040.

After taking into account the economic impacts of the elimination of 209,000 megawatts of generation capacity, the study concluded that a full east-west HVDC overlay would result in a $183 million increase in annual labor income and a net increase of 1,320 jobs nationally.

In their letter to the FERC last week, the governors coalition noted that China is working on a plan to invest $315 billion by 2020 to build "ultra-high voltage power lines" that will carry energy from where it is generated to where it is most needed via a single national transmission grid.

The governors suggested that FERC "consider convening a series of meetings in partnership with the states, regional transmission organizations, members of Congress, and the private sector to discuss the Interconnection Seams Study and to identify the nation's transmission needs, including integration of the nation's major grids, as well as multi-state and inter-regional transmission challenges."

The coalition is chaired by Montana Gov. Steve Bullock and its vice chairman is Gov. John Carney of Delaware. Baker is a member of the coalition along with Arkansas Gov. Asa Hutchinson, California Gov. Jerry Brown, Colorado Gov. John Hickenlooper, Hawaii Gov. David Ige, Illinois Gov. Brice Rauner, Iowa Gov. Kim Reynolds, Kansas Gov. Jeff Colyer, Maryland Gov, Larry Hogan, Minnesota Gov. Mark Dayton, New York Gov. Andrew Cuomo, Oregon Gov. Kate Brown, Pennsylvania Gov. Tom Wolf, South Dakota Gov. Dennis Daugaard, Virginia Gov. Ralph Northam and Washington Gov. Jay Inslee.

Area PUDS Partner on Transmission Line

The Grant County PUD is planning to spend an estimated $4 million as part of a joint project to build a new transmission line from the Wenatchee area to a substation near Quincy. Other partners have until November 30th to opt out.

The other partners are the Chelan County and Douglas County public utility districts, and the Bonneville Power Administration (BPA). Grant County has already spent over a half a million dollars on its part of the project.

Total project cost is estimated at $24 million, which is about $5 million more than the original cost estimate in 2016.

The project was first proposed in 2004, with an agreement reached in 2012. "We had a target date for energization of the line (project completion) by 2015, Rod Noteboom of Grant County PUD said.

"One thing the counties have learned," Noteboom said, "is that with Bonneville it changes everything because you have to obey all the federal regulations that you normally don't have to work with when you build the lines yourself."

He added that the process is much more time consuming because the project is more complex and more expensive when you are working the BPA.

BPA is paying for about 50% of the amount of line that connects the Columbia substation near Quincy with a facility north of Rock Island Dam.

Noteboom has told county commissioners that the recent upgrades to Grant PUD facilities, made problems worse for on other parts of the system to the north, including parts belonging to the BPA.

"Our connection with Columbia (belonging to BPA) is contingent on us fixing those problems," Noteboom said.

(Continued on Page 5)

(Continued from Page 4)

"Because all four agencies are having trouble with various parts of the line, the joint project will allow each to fix its problems more cheaply than if each entity worked alone," he added.

Because the project is over budget, each participant has the option to opt out," Noteboom said, "but so far all the four agencies are saying they will continue.

PSE Files Expedited Electric and Gas Cases

On November 7th, Puget Sound Energy (PSE) filed a new expedited rate filing on electric and natural gas rates.

PSE is asking for an $18.9 million increase in electric rates or 0.9% on average, and a $21.7 million rate increase for natural gas customers, or 2,7% on average.

PSE requests removal of the variable power costs rather than all production-related costs, as well as the use of end-of-period depreciation to be consistent with the reflection of plant at end-of-period balances.

As the rate request is intended to be limited and expedited, rather than a full general rate case, PSE notes in its filing that it has limited its requested rate increase for natural gas service. The full natural gas revenue deficiency would exceed 3%, PSE contends, and therefore it is requesting the lower rate increase of 2.7%.

The rate change requested for electric customers on Schedules 46 and 49 is 0.71%, with Schedules 40 and 449 receiving an 0.6% increase. Rate impacts may vary slightly for industrial users as distribution charges are individually assigned.

On the gas side, PSE proposes to spread the rate increase based on an equal percentage, which the utility contends is consistent with the 2017 rate case settlement.

Although the gas rate was *not* settled in the last rate case, the WUTC did adopt an equal percentage of margin. The WUTC has 120 days to review filing and the Alliance of Western Energy Consumers has intervened.

NW Index Prices	Nov 2018	Oct 2018	Nov 2017
PGE Malin	$3.35	$2.33	$2.69
Kern River	$3.23	$2.33	$2.64
Northwest Pipeline	$3.23	$2.32	$2.63
NYMEX Futures Settlement	$3.185	$3.021	$2.752

NATIONAL NEWS

EIA: US Proved Oil and Gas Reserves Reached Record Levels in 2017

U.S. proved oil and natural gas reserves climbed to record levels at the end of 2017 to approximately double from decade-ago levels, the latest estimates from the U.S. Energy Information Administration (EIA) show.

According to figures released Nov. 29, the nation's crude oil reserves climbed 19.5% year over year to reach 39.2 billion barrels on Dec. 31, 2017, surpassing the previous record of 39.0 billion barrels set in 1970.

Total natural gas reserves climbed 36.1% year over year to a record 464.3 Tcf on Dec. 31, 2017, surpassing the previous record of 388.8 Tcf set in 2014.

Crude oil and lease condensate reserves totaled 42.0 billion barrels at the end of 2017 for a 19.2% year-over-year increase.

The U.S. ranks fourth in the world for proved natural gas reserves behind Russia, Iran and Qatar, according to the EIA. The latest estimates place the U.S. in 10th place in terms of crude oil reserves to bring the U.S. ahead of Nigeria and behind Libya.

“Stronger oil and natural gas prices combined with the continuing development of shales and low permeability formations" were the main drivers of the records, the EIA said, citing a 20% increase in the annual average West Texas Intermediate spot price in 2017 to $51.03 per barrel and a 21% increase in the annual average spot natural gas price at Henry Hub to $2.99/MMBtu.

The 2017 year-end estimates highlight "the importance of crude oil development and low permeability plays, mainly in the Southwest," the EIA said, while "the new record for natural gas extends a longer-term trend of development, mainly in shale plays in the Northeast."

Texas led all states with a 3.3 billion-barrel net increase in crude oil and lease condensate proved reserves, according to the report, followed by New Mexico with a 1.0 billion-barrel net increase.

Producers operating in the federal offshore waters of the Gulf of Mexico added 729 million barrels. Meanwhile, Pennsylvania showed the largest increase in proved natural gas reserves as it added 28.1 Tcf in the Marcellus and Utica shales.

Texas followed the Keystone State with an increase of 26.9 Tcf of proved natural gas reserves, with the largest portion of natural gas coming from associated-dissolved gas accompanying gains in proved crude oil reserves.

Louisiana added 18.4 Tcf of proved natural gas reserves as operators developed the Haynesville/Bossier Shale.

The EIA defines proved reserve estimates as "volumes of hydrocarbon resources that analysis of geologic and engineering data demonstrates with reasonable certainty are recoverable under existing economic and operating conditions."

New discoveries, thorough appraisal of existing fields, production of existing reserves, market prices, production costs and evolving technologies all influence reserve estimates from year to year.

Federal Study Warns of Climate Change Impact on U.S. Economy

The impacts of climate change continue to grow more severe and are expected to cause significant damage to the U.S. economy going forward, especially if humans do not act aggressively to adapt to current impacts and mitigate future catastrophes, the federal government warned Nov. 23 in the second part of comprehensive report analyzing the effects of global warming.

(Continued on Page 7)

(Continued from Page 6)

The Fourth National Climate Assessment, produced by 13 federal departments and agencies and overseen by the U.S. Global Change Research Program, takes a detailed look on climate change and its effect on the United States since 2000.

The first volume of the report, issued in November 2017, focused on the science of climate change, while the second volume, released Nov. 23, focuses on the impacts, risks and adaptation of climate change in the U.S.

The authors of the report issued a stark assessment of the future risks posed by global warming, stating that "in the absence of significant global mitigation action and regional adaptation efforts, rising temperatures, sea level rise and changes in extreme events are expected to increasingly disrupt and damage critical infrastructure and property, labor productivity and the vitality of our communities."

The impacts of climate change pose significant risks to U.S. trade and economy, the authors said, including more volatility in import and export prices and increased costs to U.S. businesses with overseas operations and supply chains.

Rising temperatures are also projected to reduce the efficiency of power generation while increasing energy demands, resulting in higher electricity costs, according to the report.

"Some aspects of our economy may see slight near-term improvements in a modestly warmer world. However, the continued warming that is projected to occur without substantial and sustained reductions in global greenhouse gas emissions is expected to cause substantial net damage to the U.S. economy throughout this century, especially in the absence of increased adaptation efforts," the report states

"With continued growth in emissions at historic rates, annual losses in some economic sectors are projected to reach hundreds of billions of dollars by the end of the century — more than the current gross domestic product of many U.S. states."

In addition to economic risks, climate change is expected to have widespread impacts on many other aspects of human lives, including health risks from wildfire and ground-level ozone pollution, increased stress on water supplies, flooding of coastal areas, disruptions to agricultural productivity, and threats to the nation's energy and transportation systems, the report concludes.

While the report acknowledges that transformations in the energy sector — including the shift away from coal to natural gas for electricity production and increased deployment of renewable energy — along with policy actions at the national, regional, state and local levels have succeeded in reducing greenhouse gas emissions in the U.S., the efforts are not at the scale needed to "avoid substantial damages to the economy, environment and human health over the coming decades."

“While these adaptation and mitigation measures can help reduce damages in a number of sectors, this assessment shows that more immediate and substantial global greenhouse gas emissions reductions, as well as regional adaptation efforts, would be needed to avoid the most severe consequences in the long term," the report notes.

President Trump has stated that he does not believe the science behind the federal report.

US House Democrats Begin Probe of EPA Climate Rule Rollback

Three Democratic committee leaders in the U.S. House of Representatives asked the U.S. Environmental Protection Agency to hand over documents and other information on the EPA's proposed repeal of key climate change regulations.

The requests come as Democrats are poised to take control of the U.S. House of Representatives in early 2019 after winning the majority of House seats in the Nov. 6 midterm elections.

EPA's mission to protect human health and the environment," the lawmakers said in a Nov. 20

(Continued on Page 8)

(Continued from Page 7)

letter to EPA Acting Administrator Andrew Wheeler.

The letter was signed by House Energy and Commerce Committee Ranking Member Frank Pallone, Jr., D-N.J; U.S. Rep. Diana DeGette, D-Colo., the top Democrat on the energy committee's oversight and investigations subcommittee; and Rep. Paul Tonko, D-N.Y., ranking member of the environment subcommittee.

The three Democrats asked Wheeler for information on how the EPA decided to seek to repeal the Obama administration's Clean Power Plan, a 2015 regulation aimed at cutting power sector carbon dioxide emissions, and replace it with the more lenient Affordable Clean Energy, or ACE, rule proposed in August.

The lawmakers also asked for information regarding the EPA's planned rollbacks of methane regulations for oil and gas producers, and fuel efficiency and greenhouse gas standards for passenger cars and light-duty trucks, a proposal called the Safer Affordable Fuel Efficient (SAFE) Vehicles rule.

They also asked for materials summarizing the EPA's analysis and modeling to estimate emissions reductions under the ACE rule's proposed changes to the EPA's New Source Review programming governing new or modified power plants. Under the ACE rule, a plant modification would only have to undergo NSR permitting if the project raised the plant's hourly emissions rate, rather than its total annual emissions.

The EPA proposed the change in response to industry complaints that the NSR program's permitting requirements were too burdensome and caused some utilities to forgo efficiency improvements.

Lastly, the Nov. 20 letter sought all materials, analysis or modeling that summarize the climate and public health effects of reduced methane leak inspections under the EPA's methane replacement rule.

The lawmakers asked the EPA to provide all the requested answers and documents by Dec. 4. The Nov. 20 inquiry could be the first of many similar requests from House Democrats, who have made addressing the impacts of climate change, one of their key energy-related priorities with a restored House majority.

But the party will be limited in advancing climate legislation in the new Congress, with Republicans still in control of the U.S. Senate and President Donald Trump unlikely to sign any bills into law that would undo his efforts to ease regulations for energy producers.

House Bill Offers Only a One-Year Extension on Renewable Credits

A new bill from the U.S. House of Representatives includes only one-year retroactive extensions to some renewable energy credits and excludes an investment tax credit for energy storage technologies, disappointing clean power advocates.

House Ways and Means Committee Chairman Kevin Brady, R-Texas, released a tax and oversight package late Nov. 26 that included retirement and savings enhancements, tax relief for California wildfire victims and communities affected by recent hurricanes and other natural disasters, and extensions to some existing tax credits.

The bill would modify Section 45(d) of the U.S. tax code to extend construction deadlines for certain renewable energy technologies to qualify for production tax credits by one year, to January 1, 2019.

The extensions apply to electric generating facilities powered by open- and closed-loop biomass technologies, geothermal energy, landfill gas, municipal solid waste, and to incremental hydropower and marine and hydrokinetic renewable energy facilities.

But renewable energy groups were seeking more time. By only extending the credits by one year, the bill "fails to provide any incentive for future investment, even as that is supposed to be the purpose of the credits," said Toddy Foley, senior vice president for policy and government affairs for the American Council on Renewable Energy.

(Continued on Page 9)

(Continued from Page 8)

"At a minimum, the credits for these technologies should be extended through the end of 2021 to provide a stable business planning horizon."

Foley was also disappointed that the legislation did not include a federal investment tax credit, or ITC, for energy storage, a technology that supporters say is key to expanding renewable energy deployment.

Shortly before Brady released his tax proposal, a coalition of clean energy groups urged Congress to include an ITC for energy storage in one of its end-of-year bills.

"With many other competitor energy technologies proposed for the ITC, allowing energy storage access to the same ITC is critical to ensure a level playing field across all energy technologies," the industry groups said in a Nov. 26 letter to House GOP Leader Paul Ryan, House Democratic Leader Nancy Pelosi, U.S. Senate Majority Leader Mitch McConnell and Senate Democratic Leader Chuck Schumer.

The groups pointed to bipartisan legislation entitled the Energy Storage Tax Incentive and Deployment Act — H.R. 4649 in the House and S. 1868 in the Senate — that would allow energy storage to qualify for federal investment tax credits.

Under both bills, all energy storage technologies, including batteries and pumped hydropower systems, would be eligible for the credit through modifications to Sections 48 and 25 of the federal tax code. Currently, storage systems can only qualify for investment tax credits if they are installed in conjunction with solar power systems, according to a press release on H.R. 4649.

Despite the setback in the new House bill, the storage ITC "has a very good chance" of making it into other end-of year legislation, most likely an upcoming appropriations bill for fiscal year 2019, Solar Energy Industries Association spokesperson Alex Hobson said. If the ITC is not attached to legislation in 2018, the credit could be included in an eventual infrastructure package from Congress, if there is a tax component, Hobson added.

Democrats, who are set to take control of the House in 2019, are interested in proposing infrastructure legislation in the new Congress that starts in January.

Debate Begins on the Clean Power Plan and the Affordable Clean Energy

Utilities, coal power plant owners and environmentalists are looking to the future and bracing for a legal fight over "Clean Power Plan II — the sequel," as a Nov. 14 paneled discussion nicknamed the Trump administration's new emissions proposal at the National Association of Regulatory Utility Commissioners' 2018 annual meeting in Orlando, Fla.

Released Aug. 21 by the EPA, the Trump administration's not-yet-finalized Affordable Clean Energy, or ACE, rule seeks to keep regulated coal-fired power plants in operation by imposing more lenient carbon dioxide reductions through heat rate efficiency improvements than those sought by the Obama-rule, the Clean Power Plan, or CPP.

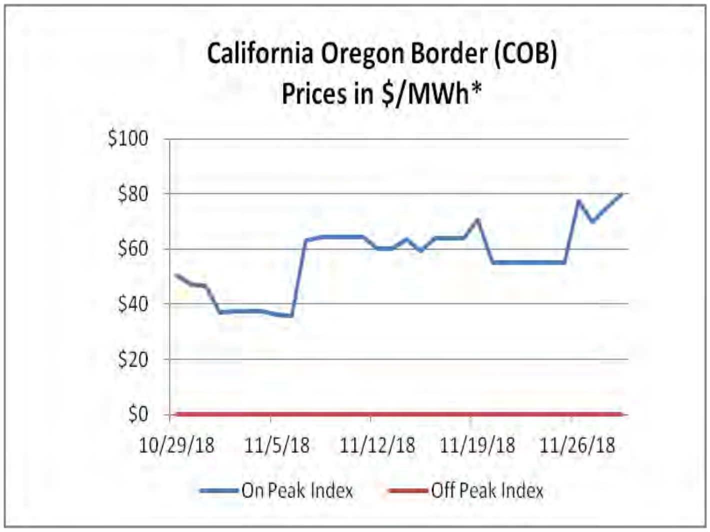
The Obama administration's CPP, which was finalized in 2015, would have required emissions rate cuts for fossil fuel-fired generating units using such methods as energy efficiency measures, the dispatch of more natural gas generation or increased use of renewables. However, more than half of U.S. states along coal and power industry groups challenged the CPP, and in February 2016 the U.S. Supreme Court placed the rule on hold amid litigation.

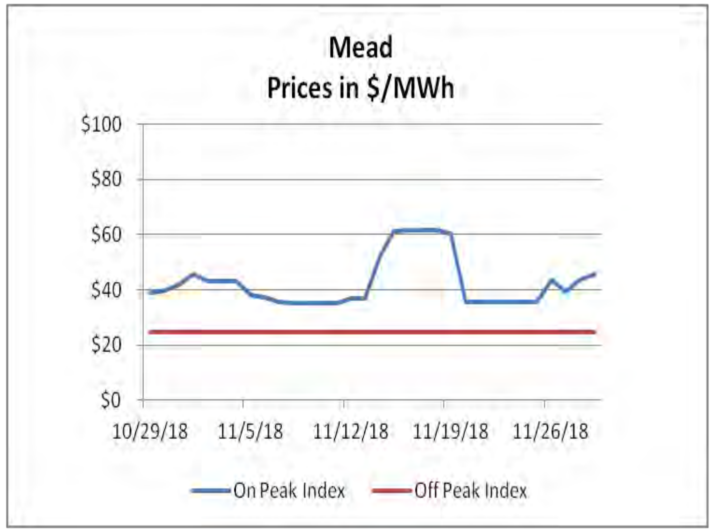
For the Supreme Court to grant an emergency stay of the CPP, Allison Wood, a partner at Hunton Andrews Kurth law firm, said the court would have had to expect that a pending lower court decision would have favored the plaintiffs opposed to the CPP.

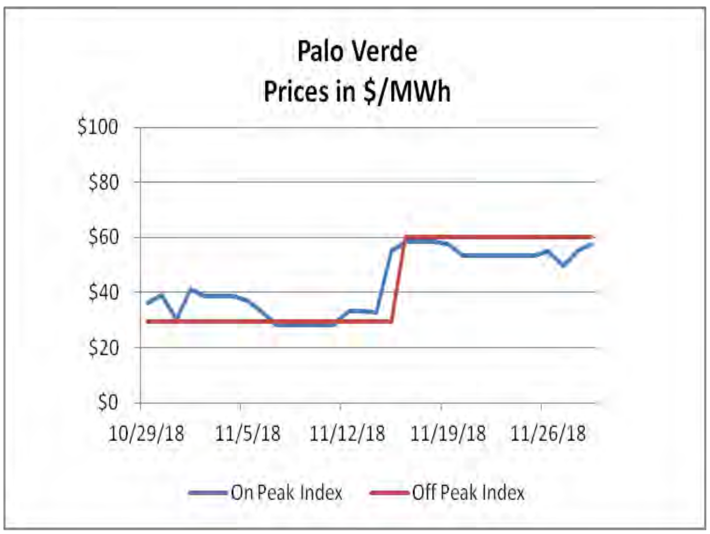
Opponents who are among those who challenged the CPP argued the rule unlawfully encouraged coal-fired power plants to outsource their electric output to lower-emitting renewable and natural gas-fired generators located "outside the fence line" of a regulated facility.

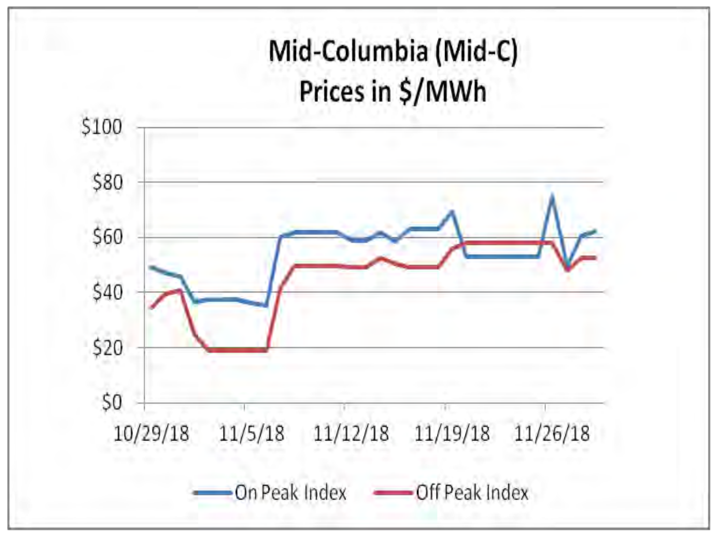
In contrast, the proposed ACE rule focuses on "inside the fence line" measures that can be accomplished through the use of the best system of emissions reduction at an individual plant.

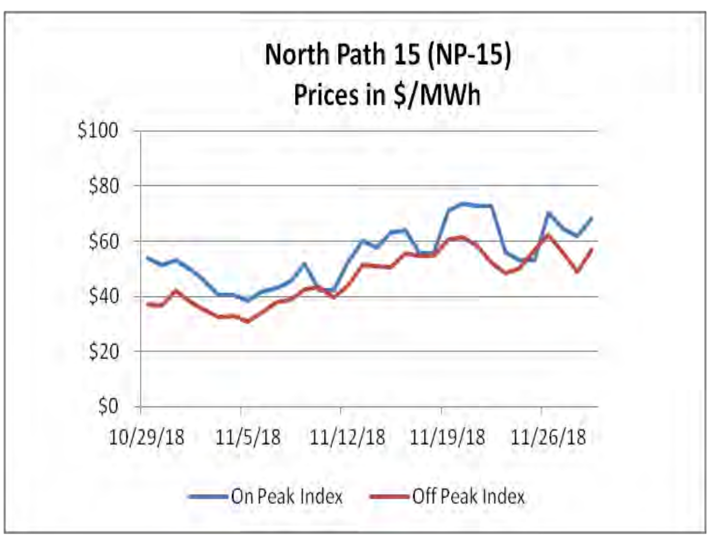
Western Electricity Market Prices

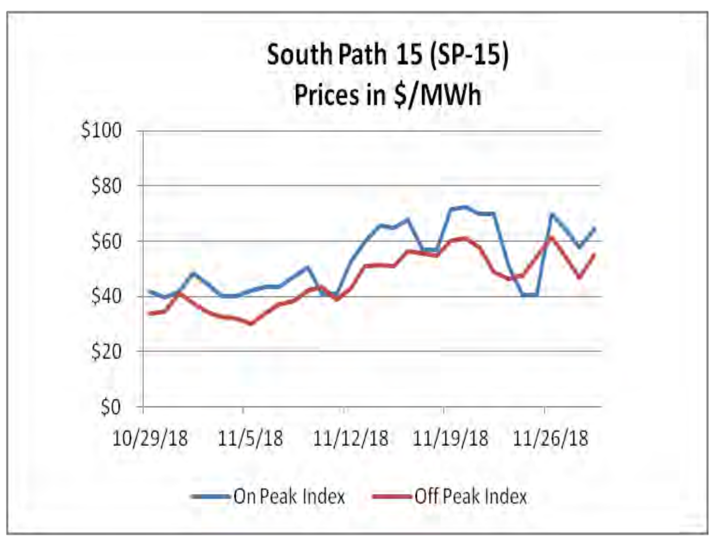












* COB off-peak prices unavailable

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 12/12/2018 09:17:43 AM

To: Aldis.Raisters@gapac.com; Hugh.O.Pierce@tsocorp.com; kwilson@legadv.com; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; Noel.Mak@atimetals.com; Samuel.Liebelt@kapstonepaper.com; todd.wiseman@solvay.com; tom@richlandpaper.com; jeff.steed@northwesthardwoods.com; mike.kuhn@westrock.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; mary mccordic@shell.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; SteveHarper@thisisnoble.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Kelly Francone <kfrancone@energystrat.com>; Alex Koleber; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Bill Smith <Bill.Smith@airliquide.com>; Boz <vanhoutb@ohsu.edu>; Brad Beavers <bbeavers@timberproducts.com>; Brad Troup <Brad.L.Troup@tsocorp.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@nippondynawave.com>; Briane Keene <BrianR.Keene@airliquide.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <WittmannConsultingLLC@outlook.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Chad Sorber <sorber@ohsu.edu>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leon <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Dan Riley <daniel.t.riley@tsocorp.com>; Dave Post <Dave.Post@wahchang.com>; David Barge <David.A.Barge@tsocorp.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Mitcheltree <DBM@eesconsulting.com>; David Tobin <DavidTobin@boisepaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <Don.Sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@precastcorp.com>; Eric Streicher <Eric.Streicher@airgas.com>; Ernesto M Negrete <Ernesto.M.NegretePapadakis@tsocorp.com>; Fawn Barrie <fbarrie@legadv.com>; Gary Collison <GCollison@pccstructurals.com>; Graham Bailey <graham.bailey@nippondynawave.com>; Greg Miller <greg.miller@weyerhaeuser.com>; Greg Vaughn <greg.vaughn@resolutefp com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; JaDPrice <JaDPrice@gapac.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell.com>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.org>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Marty Sedler <marty.sedler@intel.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Broughton <michael.l.broughton@boeing.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@rocktenn.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.Slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Public Affairs Counsel <pac@pacounsel.org>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <PLydon@lhs.org>; Pat Ortiz <Patrick.Ortiz@kapstonepaper.com>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Sandi Swarthout <sswarthout@capconn.net>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <Scott.R.Hawley@tsocorp.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steve Wood <S.Wood@resolutefp.com>; Steven Castracane <steven.castracane@linde.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tony Hardenbrook; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; William McMahon <william.mcmahon@ipaper.com>; Bill Gilmore <billmg@penwool com>; Chad Stokes <cstokes@cablehuston.com>; Charley <[redacted]>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; Dave Rickman <dave.rickman@kaisertwd.com>; David Hawk <[redacted]; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Ed Coghlan <Ed.coghlan@onsemi.com>; Greg Takisaki <Greg.takasaki@kaisertwd.com>; Jake Evans <Jake.evans@onsemi.com>; Jared Sommer <sommerj@byui.edu>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kristine Dippold <Kristine.A.Dippold@boeing.com>; Kyle Williams <williamsk@byui.edu>; Nick Avenetti <nick@perlite.com>; Kaiser, Nick <Nick.Kaiser@nippondynawave.com>; Phil Foss <phil.foss@onsemi.com>; Rick Stricker <rstricker@baf.com>; Tommy Brooks <tbrooks@cablehuston.com>; Chuck Gates [redacted]; Nancy Holbrook <Nancy.Holbrook@bp.com>; Robert Pierce <robert.pierce@shell.com>; Rusty Williams <williwk@bp.com>

Subject: Natural Gas Interruption Article in the Willamette Week

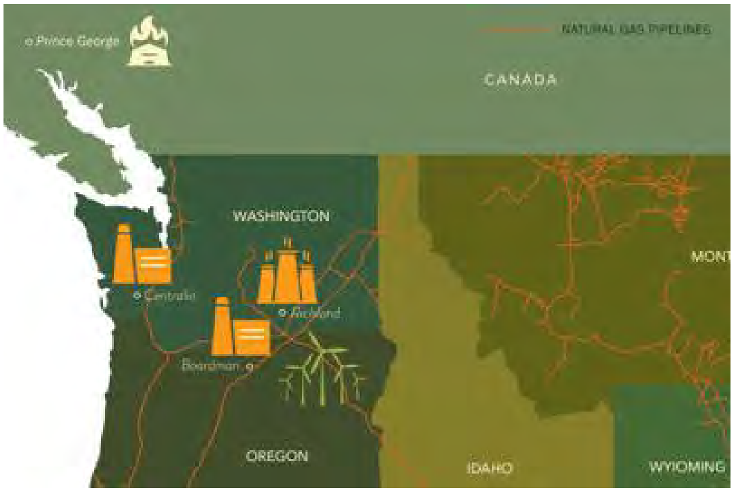
---

https://www.wweek.com/news/2018/12/12/a-natural-gas-pipeline-explosion-in-british-columbia-spikes-prices-in-portland-and-raises-questions-about-oregons-energy-future/

A Natural Gas Pipeline Explosion in British Columbia Spikes Prices in Portland and Raises Questions About Oregon’s Energy Future

Despite over-supply, natural gas prices will be higher this winter

By Nigel Jaquiss |



In October, a natural gas pipeline ruptured outside a British Columbia town called Prince George, sending a fireball skyward. The aftershocks from that blast are still being felt in Portland.

Last week, the Oregon Public Utility Commission held a special meeting to consider the implications of the rupture, which extend far beyond short-term price spikes.

"We haven't expanded our capacity to move gas since the early 1990s," says Ed Finklea, who represents large industrial customers. "If this region is really serious about switching to renewable energy, gas has to be really reliable."
Here are five takeaways from the disruption:

1. **Despite a glut, natural gas prices will be higher this winter.** Oregon produces virtually no natural gas, and two-thirds of the gas we consume comes from Canada. Prices spiked immediately after the rupture, briefly trading at up to 30 times the pre-explosion price, according to Randy Friedman, NW Natural's director of gas supply. They have since softened but remain about 25 percent higher than pre-explosion prices. Prices for residential buyers are set before the heating season—and this year were at 15-year lows. They will be adjusted upward next summer to reflect the explosion. Friedman says the supplies will remain tight for months as the pipeline gets repaired. "We are not going to be out of this situation until the winter is over," he says.

2. **Oregon is particularly susceptible to disruption.** Oregon gets gasoline delivered by pipelines, ships and trucks. But there's only one way for natural gas to get here: pipelines. That makes us vulnerable to any kind of disruption. Friedman says explosions or other outages are rare—but geologists say Oregon will suffer a cataclysmic earthquake in the future, which could sever existing pipelines. Bob Jenks of the Citizens' Utility Board notes that NW Natural's massive gas storage facility in Mist, Ore., was full when the explosion happened, highlighting an approach to mitigating Oregon's dependence on pipelines. "One option is to build more storage," Jenks says.

3. **The state's transition to green energy presents challenges.** Oregon has aggressively developed wind and solar electrical generation capacity over the past decade. Meanwhile, the region's two existing coal plants, in Boardman, Ore., and Centralia, Wash., are slated for closure, and pressure is mounting to close the Northwest's only remaining nuclear plant, the Columbia Generating Station near Richland, Wash. Coal and nuclear power present environmental dangers, but they are reliable; wind and solar are intermittent. Finklea, who represents the Alliance of Western Energy Consumers, says those plants saved the Northwest from catastrophic outages in October. "What would the region have done," Finklea asks, "if the two unpopular sources of electricity, coal plants and the Columbia Generating Station nuclear facility, were not online or if they had already been retired?"

4. **The world is awash with natural gas, but Oregon businesses won't benefit.** At the PUC meeting last week, Finklea raised the loudest concerns. He explained that many industrial gas users shut down their factories or switched to diesel briefly after the explosion, averting the possibility that entire cities—including Portland—could have seen their pilot lights extinguished. That would have required a lengthy and expensive door-to-door relighting, taking weeks or even months. Fracking has caused

record gas supplies, but Finklea says the Northwest will suffer because it lacks sufficient pipeline capacity. "Our region is now experiencing high prices," Finklea says, "not from an actual supply shortage but from an infrastructure constraint."

5. **Environmentalists will oppose any new pipelines.** A decade ago, NW Natural and others set out to build new capacity—the proposed Palomar pipeline—to connect plentiful Rockies gas to planned liquefied natural gas export facilities. None of it got built, in part because of environmental opposition. That opposition has only grown stronger, as backers of the Jordan Cove LNG project near Coos Bay can attest. Doug Moore, executive director of the Oregon League of Conservation Voters, says industry should invest instead in storage and clean technologies. "We should be transitioning to a post-carbon environment," Moore says. "Let's focus on storage and technology instead of investing in capacity that's going to be out of date very soon."

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Kelly Francone <kfrancone@energystrat com>

Sent time: 12/06/2018 10:03 06 AM

To: Aldis Raisters@gapac com; Hugh O Pierce@tsocorp com; kwilson@legadv com; Martha_C@columbiasteel com; marycatherine mcaleer@weyerhaeuser com; mruckwardt@schn com; Noel Mak@ATImetals com; Samuel Liebelt@kapstonepaper com; todd wiseman@solvay com; tom@richlandpaper com; Aldis Raisters@gapac com; jeff steed@northwesthardwoods com; Mark_R@columbiasteel com; Martha_C@columbiasteel com; mike kuhn@westrock com; Noel Mak@ATImetals com; Samuel Liebelt@kapstonepaper com; Beth@cmsnaturalgas com; CMS@cmsnaturalgas com; James_Clarken@oxy com; jpino@uetllc com; mary mccordic@shell com; randy schultz@bp com; rgreenwell@uetllc com; [redacted] rick kunz@shell com; Ted@cmsnaturalgas com; teresa acosta@calpinesolutions com; Kelly Francone <kfrancone@energystrat com>; Alex Koleber; Alicia Fuentes <Alicia Fuentes@solvay com>; Alicia Givens <agivens@pacounsel org>; Ben Byman <Ben Byman@lvpnp com>; Bernie McNamee <bmcnamee@timberproducts com>; Bill Castleberry <Bill Castleberry@emeraldmaterials com>; Bill Smith <Bill Smith@airliquide com>; Boz <vanhoutb@OHSU EDU>; Brad Beavers <bbeavers@timberproducts com>; Brad Troup <Brad L Troup@tsocorp com>; Bradley Mullins <brmullins@mwanalytics com>; Brian Wood <brian wood@NipponDynawave com>; Briane Keene <BrianR Keene@airliquide com>; Bruce Martin <bruce martin@westrock com>; Bruce Wittmann <WittmannConsultingLLC@outlook com>; Calli Daly <calli daly@kochps com>; Calvin Greene [redacted]; Chad Sorber <sorber@OHSU EDU>; Charley Hathaway <charley hathaway@nwpsllc com>; Chris Horn <chris_h@columbiasteel com>; Clifford Barr <Clifford G Barr@tsocorp com>; Craig Anneberg <Craig anneberg@norpacpaper com>; Cynthia Leon <cynthia leon@ipaper com>; Dan Coyne <dancoyne@coynenet com>; Dan Riley <daniel t riley@tsocorp com>; Dave Post <Dave Post@wahchang com>; David Barge <David A Barge@tsocorp com>; David Clemens <David Clemens@darigold com>; David Elliot <davidelliott@boisebuilding com>; David Mitcheltree <DBM@EESconsulting com>; David Tobin <DavidTobin@BoisePaper com>; Delee Shoemaker <delees@microsoft com>; Dennis <Dennis Draleau@recsilicon com>; Don Hendricksen <donald j hendrickson@boeing com>; Don Sturtevant <Don Sturtevant@simplot com>; Donna Gehlhaart <Donna Gehlhaart@ipaper com>; Doug Krapas <dougkrapas@iepco com>; Drew Bryck <drew m bryck@boeing com>; Drew Gilpin <drew gilpin@evrazna com>; Ed Finklea <efinklea@awec solutions>; Eric Fuller <efuller@precastcorp com>; Eric Streicher <Eric Streicher@Airgas com>; Ernesto M Negrete <Ernesto M NegretePapadakis@tsocorp com>; Fawn Barrie <fbarrie@legadv com>; Gary Collison <GCollison@pccstructurals com>; Graham Bailey <graham bailey@NipponDynawave com>; Greg Miller <greg miller@weyerhaeuser com>; Greg Vaughn <greg vaughn@resolutefp com>; Irene Plenefisch (LCA) <irenep@microsoft com>; JaDPrice <JaDPrice@gapac com>; Janese Pearson <Janese Pierson@ipaper com>; Jeff Johnson <Jeff Johnson@recsilicon com>; Jenifer Suffridge <jenifer suffridge@shell com>; Jennifer <jenny@pacounsel org>; Jennifer Hackett <Jena Hackett@ipaper com>; Jim Stanton <jstanton@microsoft com>; JL Wilson <jlwilson@pacounsel org>; John Bob <John Bob@am dynonobel com>; John Carr <jcarr@awec solutions>; John Domingo <jdomingo@pccstructurals com>; John Latimer <john latimer@shell com>; Josh Weber <jdw@dvclaw com>; Justen Rainey <JustenR@pacounsel org>; Karen Vaughn <Karen Vaughn@gapac com>; Keith Warner <keith c warner@boeing com>; Ken Dey <ken dey@simplot com>; Ken Johnson <ken johnson@recsilicon com>; Kenneth Li <kenneth Li@gapac com>; Kevin Davis <kevin_davis@iepco com>; Kevin Rasler <kevin_rasler@iepco com>; Khaly Niang <Khaly Niang@airliquide com>; Larry Voos <larry voos@norpacpaper com>; Laura Jane Schaefer <schaefel@OHSU EDU>; Leslie Adams <adamsla@airproducts com>; Luke Hart <Luke Hart@axiall com>; Marcie Peters <marcie peters@solvay com>; Mark Dunn <mark dunn@simplot com>; Mark Nelson <pacounsel@pacounsel org>; Mark Roeter <Mark_R@columbiasteel com>; Mark Steele <steele@norpac com>; Marty Sedler <marty sedler@intel com>; Matt Ruckwardt <mruckwardt@schn com>; Matt Upmeyer <matt upmeyer@lambweston com>; Melissa Gombosky [redacted]; Metrick Houser <Metrick Houser@ipaper com>; Michael Broughton <michael l broughton@boeing com>; Michael Culver <michael culver@ipaper com>; Michael Kuhn <MKuhn@RockTenn com>; Michael Kuhn <mkuhn@RockTenn com>; Michael Padgett <Michael Padgett@alcoa com>; Michael Slattery <Michael Slattery@evrazna com>; Mike Hale <Michael Hale@simplot com>; Mitch Maynard <mmaynard@DeltaEnergyllc com>; Nick Kaiser <Nick Kaiser@NipponDynawave com>; Public Affairs Counsel <pac@pacounsel org>; Pat Ealy <pat ealy@akzonobel com>; Pat Lydon <PLydon@LHS org>; Pat Ortiz <Patrick Ortiz@kapstonepaper com>; Patrick Loupin <PatrickLoupin@PackagingCorp com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac com>; Ralph Saperstein <Ralph@Ralphsaperstein com>; Randy Clancy <clancyrb@airproducts com>; Raymond L Beard <BEARDRL@airproducts com>; Richard White <richard a white7@boeing com>; Rob Buckingham <rob buckingham@norpacpaper com>; Rob Freres <rtfreres@frereslumber com>; Ryan Beaver <Ryan Beaver@weyerhaeuser com>; Ryan Spiller <Ryan@capconn net>; Samantha Julian <Samanthaj@pacounsel org>; Sandi Swarthout <sswarthout@capconn net>; Sarah Schack <sschack@timberproducts com>; Scott Gutting <sgutting@energystrat com>; Scott Hawley <Scott R Hawley@tsocorp com>; Scott Wagener <Scott Wagener@spfibertech com>; Skylar <Skyler Mlasko@northwesthardwoods com>; Spiro E Xenos <spiro e xenos@boeing com>; Stan Jackson <S Jackson@shell com>; Steve Wood <S Wood@resolutefp com>; Steven Castracane <steven castracane@linde com>; Tim Boyd <[redacted]; Tim Root <timothy root@axiall com>; Tom Rouleau <Tom Rouleau@darigold com>; Tony Hardenbrook; Trudy Slagle <trudy slagle@lambweston com>; Tyler C Pepple <tcp@dvclaw com>; Tyne Brownlow <tyne brownlow@ipaper com>; Wes Hill <Wes Hill@gapac com>; William McMahon <william mcmahon@ipaper com>; Ben Byman <Ben Byman@lvpnp com>; Bernie McNamee <bmcnamee@timberproducts com>; Bill Gilmore <billmg@penwool com>; Boz <vanhoutb@OHSU EDU>; Brian Wood <brian wood@NipponDynawave com>; Brian Wood <brian wood@NipponDynawave com>; Bruce Martin <bruce martin@westrock com>; Calli Daly <calli daly@kochps com>; Chad Sorber <sorber@OHSU EDU>; Chad Stokes <cstokes@cablehuston com>; Charley <[redacted]>; Charley Hathaway <charley hathaway@nwpsllc com>; Chris Horn <chris_h@columbiasteel com>; Clay Riding <clayr@nw-iw com>; Daryll Fuentes <dfuentes@usg com>; Dave Rickman <dave rickman@kaisertwd com>; David Clemens <David Clemens@darigold com>; David Hawk <[redacted]; David Hawk [redacted]; David Jones <david jones@swansongroup biz>; Dave Post <Dave Post@wahchang com>; Don Hendricksen <donald j hendrickson@boeing com>; Don Sturtevant <don sturtevant@simplot com>; Drew Bryck <drew m bryck@boeing com>; Ed Coghlan <Ed coghlan@onsemi com>; Ed Finklea <efinklea@awec solutions>; Eric Fuller <efuller@precastcorp com>; Gary Collison <GCollison@pccstructurals com>; Greg Miller <greg miller@weyerhaeuser com>; Greg Takisaki <Greg takasaki@kaisertwd com>; Jake Evans <Jake evans@onsemi com>; JaDPrice <JaDPrice@gapac com>; Jared Sommer <sommerj@byui edu>; Jenifer Suffridge <jenifer suffridge@shell com>; Jennifer <jenny@pacounsel org>; Jim Duke <jduke@idahoan com>; JL Wilson <jlwilson@pacounsel org>; Joe Burrell <Joseph g burrell@jci com>; John Carr <jcarr@awec solutions>; John Latimer <john latimer@shell com>; Justen Rainey <justenr@pacounsel org>; Keith Warner <keith c warner@boeing com>; Kristine Dippold <Kristine A Dippold@boeing com>; Kyle Williams <williamsk@byui edu>; Laura Jane Schaefer <schaefel@OHSU EDU>; Mark Dunn <mark dunn@simplot com>; Mark Steele <steele@norpac com>; Matt Upmeyer <matt upmeyer@lambweston com>; Michael Broughton <michael l broughton@boeing com>; Michael Padgett <Michael Padgett@alcoa com>; Mike Hale <Michael Hale@simplot com>; Nick Avenetti <nick@perlite com>; Kaiser, Nick <Nick Kaiser@NipponDynawave com>; Pat Lydon <PLydon@LHS org>; Pat Ortiz <Patrick Ortiz@kapstonepaper com>; Phil Foss <phil foss@onsemi com>; Phil Zirngibl <Pzirngi@gapac com>; Rick Stricker <rstricker@baf com>; Sarah Schack <sschack@timberproducts com>; Skylar <Skyler Mlasko@northwesthardwoods com>; Stan Jackson <S Jackson@shell com>; Tim Boyd <[redacted]; Tom Rouleau <Tom Rouleau@darigold com>; Tommy Brooks <tbrooks@cablehuston com>; Trudy Slagle <trudy slagle@lambweston com>; Tyler C Pepple <tcp@dvclaw com>; Chuck Gates [redacted]; Nancy Holbrook <Nancy Holbrook@bp com>; Robert Pierce <robert pierce@shell com>; Rusty Williams <williwk@bp com>; Francone, Kelly <kfrancone@energystrat com>

Subject: AWEC Weekly Energy Brief

AWEC WEEKLY ENERGY BRIEF

Wash. regulators reject Avista's sale to Hydro One owing to political risks, Sara May Bellizzi - SNL

The proposed acquisition of Avista Corp. by Canada-based Hydro One Ltd. was rejected by the Washington Utilities and Transportation Commission on Dec. 5, owing to political risks stemming from provincial authority over Hydro One. The Province of Ontario is Hydro One's largest shareholder with a 47% stake in the company.

Hydro One, Avista merger proceedings

Commission	Status
Federal Energy Regulatory Commission	Commission approval received Jan. 16
Regulatory Commission of Alaska	Commission approval received June 4
Idaho Public Utilities Commission	Amended settlement filed Nov. 16
Montana Public Service Commission	Approved June 12; commission final order issued July 10
Oregon Public Utility Commission	Target date for decision Dec. 14
Washington Utilities and Transportation Commission	**Commission rejected Dec. 5**

Additional approvals

	Status
Committee on Foreign Investment in the United States	Review completed May 21
Hart-Scott-Rodino Antitrust Improvements Act	Waiting period expired April 5
Avista shareholder approval	Approval occurred Nov. 21, 2017

Data as of Dec. 5, 2018.
Source: Regulatory Research Associates, an offering of S&P Global Market Intelligence

The commission, or WUTC, concluded "the proposed transaction does not make customers better off than they would be without it" concluding "the proposed transaction does not provide a 'net benefit to customers'" as required under Washington state law.

State law currently requires the WUTC to apply a net benefit standard for regulated energy utility mergers and acquisitions. The WUTC found that the proposed transaction "fails to provide a net benefit to Avista's customers" and "is not consistent with the public interest."

Although the WUTC staff and other parties had filed a settlement on March 27 in support of the merger, calling for Avista's retail customers in Washington to be provided with a rate credit of $30.7 million, the subsequent shakeup of Hydro One's board on July 11, caused the WUTC to extend its review to seek additional details. According to the WUTC, the "risks and potential consequences for Avista of political interference in Hydro One's commercial operations are simply too great relative to the marginal benefits offered through the Settlement Stipulation."

Avista and Hydro One are reviewing the WUTC's order to determine the next step. The transaction has been approved by regulators in Alaska and Montana, but approval by regulators in Idaho and Oregon are pending as those commissions also extended their reviews following the management changes at Hydro One.

History of the proceeding

On Sept. 14, 2017, Avista and Hydro One filed their initial request for approval in Alaska, Idaho, Montana, Oregon and Washington and with the Federal Energy Regulatory Commission. Marking its initial entry in the U.S. market, Hydro One on July 19, 2017, announced the purchase of Avista for US$5.3 billion in cash and the assumption of debt. The transaction would expand Hydro One's electric transmission and distr bution business into the U.S. and add gas distribution.

A settlement was filed March 27 by the parties to the WUTC review of the proposed acquisition, calling for Avista's retail customers in Washington to be provided with a rate credit of $30.7 million, 5% of the Washington-jurisdictional base revenue as of Feb. 1, over five years commencing upon merger closure.

Leading up to elections in the province of Ontario on July 7, Progressive Conservative party leader Doug Ford vowed to cut board pay and improve transparency in decision-making at Hydro One, which is controlled by the provincial government and operates Ontario's electric transmission and distribution grid. The previous provincial government spun off a majority stake in Hydro One but remains the utility's single largest shareholder with a 47% stake in the company.

Following Ford's subsequent win, Hydro One Ltd. announced on July 11 that CEO Mayo Schmidt would be retiring effective immediately and that the board of directors would be replaced, pursuant to an agreement with the province of Ontario. The agreement stated that the directors of Hydro One would resign and be replaced by a new board of directors.

The WUTC then filed a notice of intent on July 12 to gather additional information and ordered Avista and Hydro One to file comments accordingly. Since the transition to a new board of directors was not anticipated until Aug. 15, the day after the statutory deadline for a commission decision in the docket, the WUTC invoked the "for cause" provision and extended the deadline to Dec. 14. Additional hearings were held and testimony was filed over the course of the ensuing months.

Hydro One share prices dropped dramatically following the ousting of the board, and their credit ratings were downgraded.

WUTC order cites political risk

In the Dec. 5 order denying the merger, the WUTC stated that "the province has been anything but exemplary in its behavior, involving itself in direct and substantial ways in Hydro One's business… Moreover, the provincial government has expressed through its leader the belief that Hydro One is not a private corporation. It no longer is clear that Hydro One can be regarded as a private, publicly traded corporation. While not legally a Crown Corporation, Hydro One manifestly is subject to being controlled by the province's legislative power."

The WUTC states "[t]here is no evidence that the Board of Directors considered the potential adverse consequences that might follow from these events, once announced. There is evidence suggesting that no such due diligence review was conducted with respect to several specific risks of harm that could reasonably be anticipated would follow from Hydro One's July 11, 2018, announcement."

The WUTC raised several concerns over the province of Ontario's authority over Hydro One with respect to executive compensation and other matters, opining the company is subject to the "political will of its leadership."

As noted by the WUTC, the Ontario provincial government enacted, effective Aug. 15, the Hydro One Accountability Act, which gives the province "significant authority over executive compensation that may impair the board's ability to attract and retain executives with experience and ability comparable to that of Avista CEO Morris or CEO's at other well-run investor-owned utilities."

The WUTC noted that law also amended the Ontario Energy Board Act to prohibit compensation rates being paid to the CEO and executives of Hydro One from being included in rates. According to the WUTC, "There appears to be nothing that would prevent this level of interference from occurring again if the government leadership becomes dissatisfied in some regard with decisions by the new board of directors or with the new CEO, or simply due to political considerations without regard to sound business practices."

The WUTC also expressed concern that additional legislation promised by the new government may be forthcoming to implement a 12% rate reduction, "thus negatively impacting Hydro One's revenues." According to the WUTC "were such legislation to affect adversely Hydro One's ability to provide financial protection and support to Avista, the Company's ability to continue providing safe and reliable service to Washington customers at reasonable rates could be impaired."

According to the commission, "The events following the provincial election in June 2018 demonstrate the material and significant risk of the proposed transaction to Avista's customers that results from the Province of Ontario's dominant ownership interest in Hydro One and the willingness of the provincial government to exert its dominance in ways that are contrary to the best interests of Hydro One and, by extension, Avista, were it to be owned by Hydro One. The financial and other benefits for Avista customers and the broader public promised by the transaction, including rate credits, are inadequate to compensate for the risks of harm Avista's customers would face were we to approve this transaction."

This furthered the concerns of the WUTC on Ontario interference in Hydro One's affairs, which subsequently could hurt Avista if the merger were to proceed. According to the commission, this "could diminish Avista's ability to continue providing safe and reliable electrical and natural gas service to its customers in Washington."

The WUTC ultimately concluded "Avista's customers would be no better off with this transaction than they would be without it."

Since the settlement was rejected, the WUTC ordered Avista and the WUTC staff to file within 60 days a proposal regarding the treatment of the $10.4 million of excess deferred income taxes, the resolution of which was left to this proceeding to be addressed. As part of the merger settlement, the parties agreed that a portion of the $10.4 million of Avista's excess deferred income taxes would be used to shorten the depreciable life of Colstrip Units 3 and 4 facility from Dec. 31, 2034, and Dec. 31, 2036, respectively, to Dec. 31, 2027. Avista holds a 15% ownership stake in Colstrip Units 3 and 4.

State review

State law currently requires the WUTC to apply a net benefit standard for energy utilities when considering a proposed sale, merger, or transfer of a regulated utility. Under the law, the WUTC is required to rule on the transaction within 11 months of the date of filing, however, the Commission may extend the deadline up to four months for cause.
The net benefit public interest law in Washington, Avista's largest jurisdiction, was enacted in 2009. The Hydro One/Avista deal is the first energy utility transaction to be considered under the more stringent standard.

Prior to that applicants, had to meet a "no harm" to the public interest standard. Under the prior statute, in determining whether a merger met the no-harm test, the WUTC generally considered whether the acquiring company had both the financial and managerial fitness to take over the acquired utility's operations, including the ability to run those operations safely and reliably

Renewable gas could help drive greenhouse gas cuts in Northwest US, study says, Sarah Smith - SNL

A combination of more renewable natural gas and more renewable power generation could could be key to moving the Pacific Northwest toward its goal of sharply cutting greenhouse gas emissions in the coming decades, according to a utility-commissioned study.

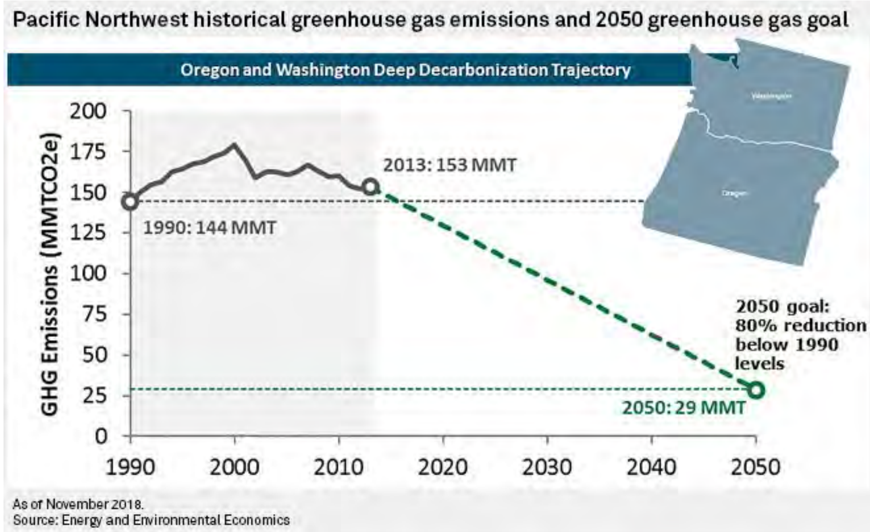
Oregon and Washington have both committed to cut greenhouse gas emissions significantly by 2050, and a study commissioned by the utility company Northwest Natural Gas Co., known as NW Natural, looked at how the energy sector could contr bute to reducing greenhouse gases in these states by 80% of 1990 levels by 2050. This target would mean bringing total regional, economy-wide emissions to 29 million tonnes of carbon dioxide equivalent releases by 2050 from about 153 million tonnes in 2013.

One route toward this goal highlighted in consulting firm Energy and Environmental Economics Inc.'s study is to make more use of renewable natural gas — natural gas released from landfills and agricultural operations, among other natural processes — and renewable hydrogen. Under direct-use-of-natural-gas scenarios, in which the energy sector does not move entirely to electrification, up to 25% biomethane could be blended into the gas stream by 2050.

Methane is the primary component of natural gas, renewable or otherwise, and has a more potent greenhouse gas impact in the atmosphere than carbon dioxide, which is one of the byproducts when methane is burned.

How much renewable natural gas, or RNG, would be required to switch 25% of the fuel stream depends on the main heat sources in use in 2050, the study said. For instance, if gas furnaces remain prevalent, the researchers projected, 84 trillion Btu of RNG would be needed, but if gas

heat pumps become more common, that amount could drop to 72 TBtu of renewable gas.



The gas furnace scenario has higher gas demand generally, and under the study's projection, an additional 6.5% of the gas in the pipeline would be hydrogen made via electrolysis, the study said. Electrolysis involves running current through a substance to produce a chemical reaction.

The study noted that the energy sector could combine additional RNG with energy efficiency and conservation measures, increased electrification of energy sources that now use gas and moving away from fossil fuel power generation to reduce the region's overall emissions profile. Each of these strategies could be paired with an array of approaches to heating, each of which carries a different mitigation cost relative to the base case, the study said.

The gas furnace scenario's costs would range between $5 billion and $10 billion, compared to the gas heat pump scenario's $3 billion to $11 billion, the cold climate heat pump scenario's $5 billion to $11 billion and the electric heat pump scenario's $10 billion to $16 billion, the study found.

Looking specifically at the buildings sector, the study concluded that "no single strategy for buildings appears to be definitively the most cost-effective, when considered in the context of an economy-wide decarbonization strategy" and said there were "multiple plausible" technology pathways for carbon cutting.

"Given this uncertainty, it would be prudent from a policy perspective to encourage the commercialization of renewable natural gas and hydrogen along with high efficiency space heating technologies in buildings," the study said.

The region should expect to build out its renewables whether it pursues greater electrification or sticks with gas use, the study said. The report projected the installed capacity of renewable resources to approximately double, from 2016's roughly 10,000 MW to about 19,000 MW in 2050 under the cold climate heat pump scenario, and to rise to 30,000 MW in the natural gas furnace scenario.

The extra power in the gas furnace scenario is for the energy required to make hydrogen through electrolysis, the study said.

Klamath Water Users Comment on Dam Removal Plan, K.C. Mehaffey – Clearing Up

The Siskiyou Water Users Association is asking FERC to reject a plan to remove four Klamath River dams and restore a free-flowing river, saying they believe the action would wipe out the river's endangered sucker fish and do little to boost coho runs, which-the group claims-may not have been present above the dams before they were built.

The nonprofit group is an intervenor in the case where FERC is currently considering a "Definite Plan" for removing the dams-three in California and one in Oregon-and an application to transfer the license for the four projects from PacifiCorp to the Klamath River Renewal Corp. (KRRC), which was formed to carry out the project *[P-2082, P-14803]*.

The group contends that the "entire stated reason for destruction of the dams rests on the belief that the coho salmon are indigenous to the Klamath, when in fact historical records show" they never were plentiful-if present at all- before the dams, its filed comments state.

The filing also asserts the fish have had to be replanted numerous times in recent history to keep the river stocked.

The association also claims that removing the dams is l kely to in1pair water quality, and cause damages from flooding.

Also it says, the Amended Klamath Hydroelectric Service Agreement that led to the current effort and to the FERC applications was illegal, as it circumvented prior unsuccessful efforts that required congressional approval.

The eight-page letter also suggests that KRRC is underfunded and offers no security to residents whose property may be damaged by flooding if the dams are removed. Additionally, it states, the dams now provide fire protection, flood control, sufficient flows for fish, recreation, improved property value and a hatchery that raises more than 6 million smolts a year.

"We encourage the commission to reject this ill-founded attempt and underfunded effort by a shell corporation to remove these Klamath Dams, subjecting an entire population of endangered species as well as the human element to a major catastrophe," their letter states, adding that FERC "will be held fully accountable for a disaster occurring because of a failure to protect the public and the surrounding counties who will bear the brunt of any miscalculation."

Bonneville Moves Closer to Energy Imbalance Market Integration, Jason Fordney – Clearing Up

BPA is moving forward with plans to join the Western EIM, currently evaluating how and under what conditions it will join the regional market, a BPA official said.

Interacting with the EIM is not something new for the federal power-marketing agency, BPA Vice President of Bulk Marketing Suzanne Cooper told the EIM Governing Body at its Nov. 29 meeting in Phoenix, Ariz.

BPA's balancing authority has close proximity to the EIM, and EIM entities use its transmission system. It already has a coordinated transmission agreement with the California ISO that was finalized in 2017, and was worked out in relation to PacifiCorp's participation in the imbalance market. It has also been doing EIM settlements since PacifiCorp's integration in 2014.

"We have a pretty long-standing relationship with the Energy Imbalance Market," Cooper said.

If BPA moves forward with participation, EIM specific implementation projects would begin in early 2020 and BPA would go live in the EIM in 2022.

In response to a question from EIM Governing Body Chairwoman Valerie Fong as to how BPA's customers are reacting to the possibility of the federal-power marketer joining the EIM, Cooper said: "There is both support and trepidation-it's mixed."

One major issue is market-mitigation procedures that are forcing hydro resources to sell energy at prices below their marginal costs, a topic being addressed in a CAISO stakeholder process.

BPA's EIM stakeholder process began in July and identified a series of issues to work through and evaluate, including resource sufficiency, treatment of transmission, how generators and others in its balancing authority can participate, EIM governance, and market-power mitigation.

The agency is taking comment on its business case and expects to vote next fall on whether to sign an EIM implementation agreement. The final decision to join the EIM will be made by the BPA administrator, Cooper said.

BPA released a five-year strategic plan in January that includes a grid-modernization focus area, although EIM evaluation and implementation is only one component of that. More generally, grid modernization is intended to support reliability, flexibility and efficiency of its assets; reduce costs; and create new market opportunities.

BPA identified 30 projects in its grid-modernization focus that will be scheduled regardless of whether or not it joins the EIM. Other EIM entities have shared with BPA the upgrades they performed, as well as the modernization projects that were underway before joining the EIM, Cooper said.

"It's sort of l ke getting your house in order before having a guest," she said.

Cooper said BPA' s four core principles for joining the EIM are that participation would be consistent with statutory, regulatory and contractual obligations; that reliable power and transmission services would be maintained; that EIM participation would always be voluntary; and that BPA's EIM participation would be based on a sound business rationale.

BPA Seeks to End Historic Foote Creek I Contracts at EWEB, PAC Request, Rick Adair – Clearing Up

BPA has proposed terminating a 25-year contract more than five years early with the 41-MW Foote Creek I wind project, located in southeast Wyoming and owned by PacifiCorp and Eugene Water and Electric Board.

If approved by Administrator Elliot Mainzer, the termination would be effective Jan. 1, 2019, subject to the owners closing an agreement dissolving their joint ownership of the project. The contract currently expires in April 2024.

In a letter to stakeholders, BPA said the owners requested early termination because it would "potentially be beneficial to all parties involved," resulting in savings to EWEB and BPA and allowing PacifiCorp-which would become the sole owner-to repower the project.

Bonneville said early termination is projected to save its ratepayers "roughly $2 million per year on a nominal basis over the remainder of the contract period," or in the neighborhood of $10 million total.

The agency entered into the contract on July 21, 1997, for 37 percent of the generation, or about 5 aMW. Under the contract terms, it pays for actual plant costs and the contract price through an annual true-up. The true-up has been "significantly positive over the past five years, resulting in additional costs to BPA," the letter said.

"BPA believes it is reasonable to expect the continued availability of power and low market prices into the near term should it need to replace its percentage share of the project's output," it added.

Under the proposed settlement agreement, BPA would pay PacifiCorp and EWEB 74 percent of the contract's liquidated-damages termination payment, to compensate them for foregone revenues. This would also allow EWEB to avoid costs associated with project decommissioning.

Because the resource is a "Designated Non-federally Owned Tier 1 Resource" under Bonneville's Tiered Rate Methodology, the agency will conduct a public process to address changes to the methodology due to the contract's termination, once the agreement is in place.

BPA received only one comment by the close of the Nov. 28 deadline, from Pacific County PUD in Washington.

The PUD said it was "appreciative" that BPA evaluated and considered the business case for vacating its purchase power rights early, but said it hoped several issues not mentioned in the letter had been addressed, including the value of production tax credits, RECs and repowering that PacifiCorp would gain through full project ownership.

For its part, EWEB declared the wind project as surplus in August 2017, noting in a memo at the time that it had " more than sufficient resources to serve its customers' energy requirements, even under drought conditions, for the next 10 years," and that removing the project would have a "small impact" on the municipality's load-resource balance over the next 10 years.

The utility also noted that it was in discussions, with PacifiCorp, to divest its interest, and that "PacifiCorp has a potential interest in controlling the entire site for its own purposes."

Foote Creek I was one of the first commercial-scale renewable energy projects brought on line for Northwest utilities, in 1999, following signing of development and power purchase agreements in 1997.

Oregon Governor's Policy Agenda Boosts Odds for a Cap-and-Trade Bill, Steve Ernst – Clearing Up

Oregon Gov. Kate Brown has made passage of statewide cap-and-trade emissions bill a legislative priority, adding even more momentum to carbon reduction legislation that is expected to be introduced when the Legislature convenes Feb. 1.

Brown 's position on cap-and-trade legislation was included in her budget and policy agenda, which was released on Nov. 28, and includes the creation of an Oregon Climate Authority that would implement and track state climate strategies.

Democrats promised at the conclusion of the 2018 session that a carbon emissions bill would be the top legislative priority in 2019, a vow they could make good on with the supermajority they gained in the Legislature after the Nov. 6 election.

Cap-and-trade bills have been debated since 2015, including a pair of "cap-and-invest" measures proposed earlier this year. In that case, climate and clean-energy activists weren't able to close the deal before the clock ran out on the short session, so both bills died in committee.

The governor's policy agenda says a cap-and-trade market will ensure "the state will achieve emissions reductions with certainty, while the market provides strong incentives for emitters to benefit from adopting the most cost-effective technologies that minimize the costs of reduction."

It also said that any proceeds from allowance auctions "can be invested in strategies to reduce emissions, protect vulnerable Oregonians from cost-pressures, help rural communities adapt to a changing climate, and enhance the capacities of our natural and working landscapes to sequester carbon."

Historically, the state's investor-owned utilities have resisted a statewide cap-and-trade program in favor of a nationwide emissions program. They also have concerns that a cap-and-trade market would increase rates and not mesh with previous climate bills.

In recent email to *Clearing Up,* Portland General Electric said it has been "actively providing constructive feedback" to Oregon policymakers about the design of statewide cap-and-trade legislation as it relates to the electricity sector, and said it believes a statewide greenhouse gas reduction policy "if designed to protect customers and the economy . . . could make sense and help Oregon achieve its statewide carbon reduction goals".

Scott Bolton, senior VP of external affairs and customer solutions at PacifiCorp, told *Clearing Up* that the utility is "in a period of exploring what this program will mean for Oregon's rural economy."

"Oregon policymakers have certainly signaled that this will be a priority and big conversation," Bolton continued, adding that the utility's primary focus "is trying to ensure that whatever the state decides to do, that it builds on and honors climate and clean energy policies that are already in place, like Senate Bill 1547 and the RPS standard.

"The real value in any proposal isn't to put a new cost on the economy, but to give clear planning signals to energy businesses around what kind of environmental footprint Oregon ultimately wants, so we have the time and means to align that business with other states we serve," he said.

Brown's policy agenda also calls for creation of an Oregon Climate Authority, replacing the Oregon Department of Energy and Carbon Policy Office.

Her vision for the new office is that it will be responsible for "implementing the state's climate strategies and tracking progress toward the state's climate goals." This would include the new carbon marketplace, greenhouse gas emissions reporting and accounting, energy markets data collection and analysis, as well as energy programs central to the state's climate and clean energy goals.

The governor would appoint a director, subject to Senate approval, and work with the Legislature to appoint a board to advise the director and determine the best long-term placement for existing energy programs at this new entity or other state agencies.

By aligning state programs in this new capacity, the state can significantly reduce the energy supplier assessment currently paid by utility ratepayers, the policy agenda says.

Brown also released on Nov. 28 the Oregon climate agenda, which lays out her strategy for addressing climate change.

In addition to implementing a cap-and-trade emissions market, the climate agenda includes hastening "the pace of electrification of vehicles in Oregon by expanding electric vehicle infrastructure and incentives to support 50,000 electric vehicles on Oregon roads by 2020."

It also seeks to "decarbonize the electricity sector by achieving the state's renewable energy targets and encouraging grid modernization, while maintaining affordable and competitive electricity rates."

The plan also calls for expanding opportunities for residential, municipal and commercial customers to access clean energy services from their utilities while ensuring utility regulation supports the utility system and does not favor new customers over existing ones.

Another goal would be strengthening and maintaining energy efficiency investments across all customer classes.

"Reducing greenhouse gas emissions, creating climate-resilient communities and growing our economy are not mutually exclusive goals," the climate agenda says. "We have a strong legacy of environmental stewardship in Oregon, and this history has shown us that well-designed programs can deliver public health and environmental benefits while facilitating a strong economy."

Scheduled coal plant retirements will take a big bite out, Taylor Kuykendall and Ashleigh Cotting - SNL

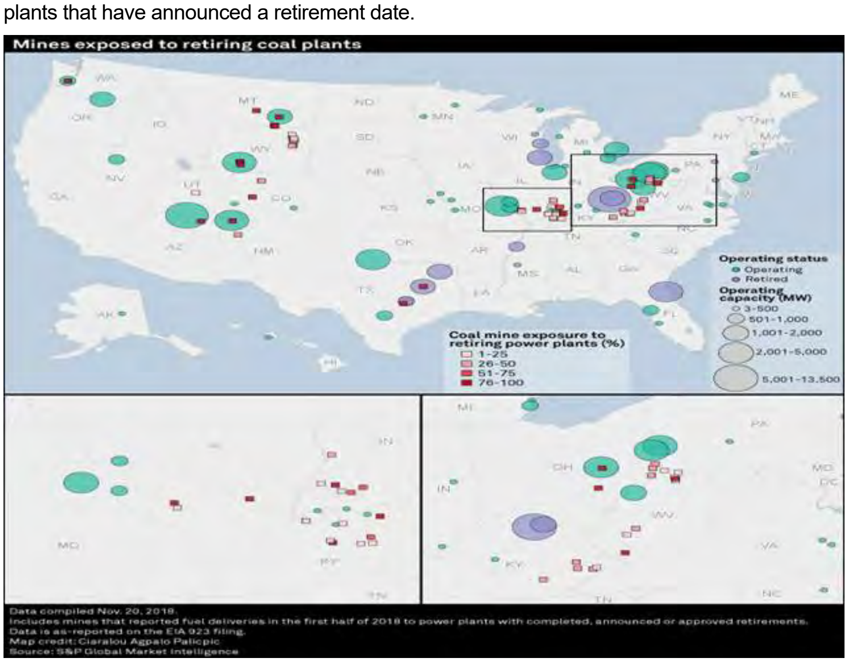
Competition among coal producers for U.S. utility market share will l kely get even tougher as power generators continue to reduce their reliance on coal generation.

In 2017, coal companies delivered 888.1 million tons of coal to domestic electricity generators; 16.1% of that coal went to power plants that are scheduled to retire within two decades, according to an S&P Global Market Intelligence analysis of federal data. Several companies delivered a substantial amount of the coal they produced to power plants expected to soon be turned off, while at least eight coal mines reported 100% of their deliveries to U.S. utilities in the first half of 2018 went to retiring power plants.

The problem for U.S. coal producers is exacerbated by a lack of new coal generation projects coming online.

"Unfortunately, utilities continue to announce coal plant closures as they install subsidized renewables and supporting natural gas generation," lamented Cloud Peak Energy Inc. President and CEO Colin Marshall on a third-quarter earnings call after projecting that 2019 demand for Power River Basin coal would be flat to "maybe up a little." Cloud Peak recently announced a strategic review that includes mulling a potential sale of the company.

About 22.8% of Cloud Peak's coal production in the first half of 2018 went to power plants scheduled to retire, according to combined U.S. Mine Safety and Health Administration and U.S. Energy Information Administration data. Westmoreland Coal Co., which filed for bankruptcy reorganization in October, delivered 66.2% of the coal it produced in the first half to plants that have announced a retirement date.



With a sharp decline in coal equity prices since the beginning of November, it seems a secular decline in coal may be weighing down coal producers who otherwise have plenty to be excited about. Some thermal coal producers are hoping utilities are getting nervous about their coal inventory levels as natural gas prices rise and export markets continue to pull domestic tons out of a market that otherwise is struggling to hold on to its customer base.

"What makes this selloff so notable is that while international steam coal prices have

weakened, met coal prices have barely budged, and the outlook for U.S. steam coal is the best it's been in some time," Seaport Global Securities LLC analyst Mark Levin wrote in a Nov. 27 note. "Equally important, the balance sheets and free cash flow profiles of publicly traded U.S. coal companies are in their best shape in decades."

The pace of coal plant retirements in 2018, according to S&P Global Market Intelligence's analysis, is just shy of matching the capacity retired in 2015, the year mercury emission regulations went into effect and pushed several older coal plants offline. While that period was characterized by an oversupply of coal that could not shrink fast enough to meet dwindling demand, now cautious coal companies that held on to their capital may find themselves unable to increase production enough to meet any potential increases in demand from a cold winter expected to boost electricity demand.

Supply constraints cap potential response to demand

While every 25-cent change in the Henry Hub natural gas price theoretically equates to about 22 million tons of incremental electric utility coal demand, Levin wrote in a Nov. 20 note, those sort of gains will be impractical due to production and transport limitations.

"We suspect there simply isn't enough excess capacity for U.S. steam coal production to increase much more than 6%-8% year over year," Levin wrote.

Hallador Energy Co. President and CEO Brent Bilsland said his Illinois Basin coal mining company has been seeing more business from U.S. utilities as export markets draw competitors' coal into the booming overseas market. While he notes his company has some capacity to increase production to meet demand, he also said that is generally not the case across the sector.

"In general, there's been so little investment in this space," Bilsland said on a Nov. 6 earnings call. "We think it's going to be hard for most people to ramp up production."

The Central Appalachia coal producers have primarily turned their focus to higher-margin metallurgical coal as thinning seams make it tougher for the region to compete in thermal coal markets. While Murray Energy Corp. had a "reasonably strong production year" in Northern Appalachia, producers such as Consol Energy Inc. and others in the region are essentially already mining at capacity, Levin wrote, though Illinois Basin producers may have some excess capacity. He estimated that even a 5 million to 10 million ton increase in coal production capacity from coal producers east of the Mississippi River could be pushing it.

Producers in the Powder River Basin, where large operations can mine coal more cheaply, have more capacity, but producers such as Arch Coal Inc. and Peabody Energy Corp. likely have little motivation to increase production without higher pricing, Levin wrote.

Top mine ultimate owners by 2018 fuel delivery volumes

	2017 (000 tons)			H1'18 (000 tons)			H1'18 exposure to retiring plants (%)	
	Deliveries to retiring plants	All deliveries	Production	Deliveries to retiring plants	All deliveries	Production	Deliveries to retiring plants/total deliveries	Deliveries to retiring plants/ production
Peabody Energy Corp.	43,311	147,084	156,728	18,032	69,191	74,507	26.1	24.2
Arch Coal Inc.	17,082	88,122	97,882	8,963	38,902	47,741	23.0	18.8
Westmoreland Coal Co.	16,381	24,305	24,787	6,088	9,610	9,200	63.4	66.2
Cloud Peak Energy Inc.	18,333	47,238	57,623	5,408	19,068	23,695	28.4	22.8
Murray Energy Corp.	9,669	50,434	60,820	2,667	19,415	28,905	13.7	9.2
Blackjewel LLC	7,061	34,637	36,977	2,269	14,851	17,354	15.3	13.1
Alliance Resource Partners LP	5,710	24,821	37,809	1,558	11,467	20,220	13.6	7.7
Berkshire Hathaway Inc.	2,687	2,988	2,837	1,052	1,265	1,496	83.2	70.3
Hallador Energy Co.	2,821	6,557	6,612	897	3,154	3,958	28.4	22.7
Lighthouse Resources Inc.	1,750	1,750	5,436	722	722	2,877	100.0	25.1

Data compiled Nov. 5, 2018.
Includes fuel deliveries to power plants with completed, announced or approved retirements.
Data is as-reported on the EIA 923 filing, apportioned by current mine ownership records.
Excludes deliveries from mines that are outside of the US.
Source: S&P Global Market Intelligence

"If they decide to ramp up sales without getting [improved] price, we suspect their investor base would be seriously disappointed," Levin wrote. "While there may be as much as 20 million to 30 million tons of capacity that could come online in the PRB in relatively short order, we don't see that happening unless the price rises."

US coal buyers remain hesitant

Despite supply constraints, declining utility inventory and other bullish factors for coal demand, some coal producers are reporting utilities are still largely on the sidelines when it comes to buying coal.

"Look, the inventories are correcting; at some point things will have to start picking back up," Arch President and COO Paul Lang said on an Oct. 23 earnings call. "But right now, I don't see a lot of pressure on the side of utilities."

Peabody Energy, the largest coal company in the U.S., is also by far the largest supplier of coal to power plants that have announced plans to retire. Though it also has extensive mining operations in Australia, about 24.2% of the company's U.S. coal production — 18.0 million tons — in the first half was delivered to power plants that have announced retirement dates.

Mines with the most exposure to retiring plants

Mine name	Ultimate owner(s)	H1'18 fuel deliveries (000 tons) To retiring plants	All deliveries	Exposure to retiring plants (%)
Rosebud Mine & Crusher/Conveyor	Westmoreland Coal Co.	3,818	3,818	100.0
Kayenta Mine	Peabody Energy Corp.	3,235	3,235	100.0
San Juan Mine 1	Westmoreland Coal Co.	1,448	1,448	100.0
Black Butte & Leucite Hills Mines	Anadarko Petroleum Corp.; Lighthouse Resources Inc.	973	973	100.0
Bridger Underground Coal Mine	Berkshire Hathaway Energy; IDACORP Inc.; Berkshire Hathaway Inc.	901	901	100.0
Jim Bridger Mine	Berkshire Hathaway Energy; IDACORP Inc.; Berkshire Hathaway Inc.	849	849	100.0
Rice No. 7 (Strip)	Westmoreland Coal Co.	362	362	100.0
Buckingham Mine No. 6	Westmoreland Coal Co.	459	459	100.0
Gateway Mine	Peabody Energy Corp.	969	1,185	81.8
Mine No. 1	Alliance Resource Partners LP	473	627	75.5
Spring Creek Coal	Cloud Peak Energy Inc.	1,097	1,542	71.1
Genesis	Murray Energy Corp.	429	825	52.0
Wild Boar Mine	Peabody Energy Corp.	462	898	51.4

Data compiled Nov. 5, 2018.
Includes fuel deliveries to power plants with completed, announced or approved retirements.
Data is as-reported on the EIA 923 filing..
Excludes deliveries from mines that are located outside of the US.
Source: S&P Global Market Intelligence

The company has been advocating for investments in carbon capture, use and storage technologies to transition to an "ultimate goal of near-zero emissions" from coal-fired power plants. Many U.S. utilities have expressed skepticism around the costs of such technologies, and many have increasingly carved out more space for natural gas and renewable generation in their portfolios. Peabody points to projections for an increase in coal-fueled generation in places like Asia where growing economies are looking for cheap sources of power.

"With global coal demand remaining strong and new coal-fueled generating plants being built in substantial numbers around the world, Peabody believes coal will continue to be an essential part of the energy mix," a Peabody spokesperson said.

Several of the top coal mining companies by exposure to retiring power plants did not respond to a request for comment.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 12/12/2018 01:32:08 PM

To: Aldis.Raisters@gapac.com; Hugh.O.Pierce@tsocorp.com; kwilson@legadv.com; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; Noel.Mak@atimetals.com; Samuel.Liebelt@kapstonepaper.com; todd.wiseman@solvay.com; tom@richlandpaper.com; jeff.steed@northwesthardwoods.com; mike.kuhn@westrock.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; mary mccordic@shell.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Kelly Francone <kfrancone@energystrat.com>; Alex Koleber; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Bill Smith <Bill.Smith@airliquide.com>; Boz <vanhoutb@ohsu.edu>; Brad Beavers <bbeavers@timberproducts.com>; Brad Troup <Brad.L.Troup@tsocorp.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@nippondynawave.com>; Briane Keene <BrianR.Keene@airliquide.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <WittmannConsultingLLC@outlook.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Chad Sorber <sorber@ohsu.edu>; Charley Hathaway <charley.hathaway@nwpsllc.com>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Cynthia Leon <cynthia.leon@ipaper.com>; Dan Coyne <dancoyne@coynenet.com>; Dan Riley <daniel.t.riley@tsocorp.com>; Dave Post <Dave.Post@wahchang.com>; David Barge <David.A.Barge@tsocorp.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Mitcheltree <DBM@eesconsulting.com>; David Tobin <DavidTobin@boisepaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Don Sturtevant <Don.Sturtevant@simplot.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Eric Fuller <efuller@precastcorp.com>; Eric Streicher <Eric.Streicher@airgas.com>; Ernesto M Negrete <Ernesto.M.NegretePapadakis@tsocorp.com>; Fawn Barrie <fbarrie@legadv.com>; Gary Collison <GCollison@pccstructurals.com>; Graham Bailey <graham.bailey@nippondynawave.com>; Greg Miller <greg.miller@weyerhaeuser.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; JaDPrice <JaDPrice@gapac.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jenifer Suffridge <jenifer.suffridge@shell.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Domingo <jdomingo@pccstructurals.com>; John Latimer <john.latimer@shell.com>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Karen Vaughn <Karen.Vaughn@gapac.com>; Keith Warner <keith.c.warner@boeing.com>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Laura Jane Schaefer <schaefel@ohsu.edu>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.org>; Mark Roeter <Mark_R@columbiasteel.com>; Mark Steele <steele@norpac.com>; Marty Sedler <marty.sedler@intel.com>; Matt Ruckwardt <mruckwardt@schn.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Broughton <michael.l.broughton@boeing.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@rocktenn.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Michael Slattery <Michael.Slattery@evrazna.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Public Affairs Counsel <pac@pacounsel.org>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <PLydon@lhs.org>; Pat Ortiz <Patrick.Ortiz@kapstonepaper.com>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Paul Langley; Phil Zirngibl <Pzirngi@gapac.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Sandi Swarthout <sswarthout@capconn.net>; Sarah Schack <sschack@timberproducts.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <Scott.R.Hawley@tsocorp.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steve Wood <S.Wood@resolutefp.com>; Steven Castracane <steven.castracane@linde.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Tony Hardenbrook; Trudy Slagle <trudy.slagle@lambweston.com>; Tyler C. Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; William McMahon <william.mcmahon@ipaper.com>; Bill Gilmore <billmg@penwool.com>; Chad Stokes <cstokes@cablehuston.com>; Charley <charleyhathaway@hotmail.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; Dave Rickman <dave.rickman@kaisertwd.com>; David Hawk <[redacted]; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Ed Coghlan <Ed.coghlan@onsemi.com>; Greg Takisaki <Greg.takasaki@kaisertwd.com>; Jake Evans <Jake.evans@onsemi.com>; Jared Sommer <sommerj@byui.edu>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kristine Dippold <Kristine.A.Dippold@boeing.com>; Kyle Williams <williamsk@byui.edu>; Nick Avenetti <nick@perlite.com>; Kaiser, Nick <Nick.Kaiser@nippondynawave.com>; Phil Foss <phil.foss@onsemi.com>; Rick Stricker <rstricker@baf.com>; Tommy Brooks <tbrooks@cablehuston.com>; Chuck Gates [redacted]; Nancy Holbrook <Nancy.Holbrook@bp.com>; Robert Pierce <robert.pierce@shell.com>; Rusty Williams <williwk@bp.com>; Amy Beck <amy.beck2@boeing.com>

Subject: AWEC Weekly Energy Brief

AWEC WEEKLY ENERGY BRIEF

Wash. Governor Inslee pitches carbon-free grid by 2045, coal ban by 2025, Garrett Hering - SNL

Unveiling their 2019 clean energy legislative agenda, Washington Gov. Jay Inslee and state Democratic lawmakers on Dec. 10 previewed proposals to ban coal-fired generation by 2025 and eliminate all fossil fuels from the state's power supply mix by 2045. The new policies would also offer tax incentives for electric vehicles, expand investments in charging stations and create new clean energy standards for transportation fuels and buildings.

"Combined these actions will cut emissions by nearly 16 million metric tons over 15 years," Inslee said at a press conference in Seattle. "This will be the steepest and swiftest reduction of greenhouse gases we have ever seen." Together, the package of proposals would slash greenhouse gas emissions 25% below 1990 levels by 2035, in line with existing state law.

"The Clean Energy Transformation Act, which will be introduced in the next session, will transform the way our state's 63 utilities generate electricity for every community in Washington," Rep. Gael Tarleton added.

The package of clean energy proposals came one month after Washington state voters rejected what would have been the nation's first carbon tax, a ballot measure supported by Inslee. Voters also expanded the state's Democratic trifecta, strengthening the party's control of both legislative bodies in addition to the governorship.

"Look, the people decided not to embrace Plan A, but there's about 400 plans behind that ready to go," said Inslee. Pressed by reporters, the governor declined to say whether the proposals were linked to a possible 2020 presidential bid. He also declined to say whether or not he might take another shot at a carbon tax.

"This is the package that we believe fits our ability to pass legislation [in 2019]," Inslee said, saying that the state would take "additional steps" to meet its commitments under to the Paris Agreement on climate change. Washington is a member of a growing coalition of U.S. subnational groupsthat remain committed to the international climate deal.

Carbon-free resources already make up 75% of Washington's electricity supply, with the recent rise of wind and solar power plants augmenting the state's abundant hydroelectric capacity. Coal accounted for 13.4% in 2017, while natural gas made up nearly 11%.

BPA Kicks Off BP-20, TC-20 Rate Processes With Increases for Both, Rick Adair – Clearing Up

BPA's proposed average wholesale rate increases for fiscal years 2020 and 2021 are 2.9 percent for power and 3.6 percent for transmission, the agency announced Dec. 6.

The initial proposal kicks off the so-called BP-20 rate-setting process, which will end with final decisions in July 2019. The new rates will take effect on Oct. 1, 2019.

BPA said it worked "diligently" to lower program spending through the 2018 Integrated Program Review, where it found $66 million in annual program spending reductions compared to the current rate period.

Additional savings from debt-management actions and from lower transmission costs tied to pending transmission and ancillary service rates settlements contributed to Bonneville's ability to offset most of the upward power rate pressure, the agency said. Without the settlements, the initial proposal for transmission rates would have been 9.7 percent, rather than 3.6 percent, and power rates would have been 3. 8 percent rather than 2.9 percent.

The cost reductions helped to offset "upward power rate pressures" from a continued decline in surplus power sales revenues, lower customer and direct service industry loads, and the financial result of a 2015 decision to fund energy efficiency through expense instead of capital, BPA said.

Nevertheless, as Bonneville explained in its end-of-fiscal-year quarterly business review in November, residual upward pressures will require rate increases.

"This rates proposal demonstrates BPA's commitment to disciplined cost-management while investing in the most valuable work, including grid modernization and strengthening our financial health," said Administrator Elliot Mainzer in a statement.

The power rate proposal supports investments in Bonneville's financial health by ensuring adequate liquidity in the form of financial reserves during the next rate period, the agency said.

In addition, BPA proposes to eliminate the spill surcharge for the BP-20 rate period but assumed increased spill in its generation modeling, which wasn't done in BP-18.

This approach was taken because Bonneville thinks its existing risk mitigation tools-including within-rate period cost management, financial reserves and the Cost Recovery Adjustment Clause-will be sufficient to cover the remaining cost uncertainty.

The agency said it will re-evaluate the decision to remove the surcharge throughout the rate case process. If the risk materially changes, it could decide to file a supplemental proposal, like it did in BP-18, to reintroduce the spill surcharge or an alternative, it said.

The proposed transmission tariff will be considered in a "TC-20 " proceeding that is premised on a transmission rate settlement, as well a separate BP-20 partial settlement for the associated ancillary and control area services rates.

By the Nov. 30 end of a four-week endorsement period, all but two of 156 customers-Sacramento Municipal Utility

District and Turlock Irrigation District-had agreed to support the settlement package.

On the strength of this support, Bonneville said it "believes that the region can still accomplish" both settlements without any changes.

SMUD and TID have objected to the proposed rate for hourly transmission service on the Southern Intertie, and intend to contest it, as they did in the BP-18 proceeding.

Also proposed is the establishment of the Financial Reserves Policy surcharge, which would increase rates if a business line's reserves are below a set lower threshold. For Transmission, the surcharge is the lesser of $15 million per year or the amount that returns reserves to the lower threshold.

For Power, the surcharge is the lesser of $30 million per year for the BP-20 rate period or the amount that returns reserves to the lower threshold.

Transmission's financial reserves are currently above its lower threshold, while Power's are below so BPA expects to apply the surcharge in BP-20.

Other rate actions proposed for implementation, as they were for BP-18, are the Cost Recovery Adjustment Clause that triggers if a business line's financial reserves are below $0, and a reserves distribution clause that triggers if both a business line's financial reserves and the agency's financial reserves exceed their respective upper thresholds.

The initial proposal would also establish the use of actual end-of-year accumulated net revenues to trigger any rate adjustments stemming from Bonneville's financial reserves policy, as opposed to the use of endof-fiscal-year projections for Cost Recovery Adjustment Clause actions used since 2007.

The previous triggering basis used end-of-year projections to set a 12-month period for collections or distributions. Under the proposed basis, a 10-month period would start in December.

The publication of the BP-20 and TC-20 in the Federal Register marked the commencement of these proceedings. Dec. 11 is the deadline for filing petitions to intervene in them.

The comment period for the TC-20 proceeding runs through Dec. 20, and through March 1 for the BP-20 proceeding.

PacifiCorp Study: Most of Coal Fleet Candidates for Early Retirement, Steve Ernst – Clearing Up

Roughly 60 percent of PacifiCorp's coal units could potentially be retired in 2022 and replaced with renewables or natural gas-fired generation, according to a much anticipated economic analysis released by the utility.

PacifiCorp released the analysis at its 2019 Integrated Resource Plan stakeholders meeting on Dec. 3 and 4,

and emphasized that additional study would be needed to determine which, if any, coal units would be retired earlier than scheduled.

The unit-by-unit economic analysis was prescribed by the Oregon PUC as part of acknowledgment of the company's 2017 IRP. It was recently the subject of a lawsuit when the Sierra Club and the Washington UTC threatened to release the study to the public. A Washington district court blocked the release on the grounds that it contained valuable commercial information.

Rick Link, VP of resource planning and acquisitions at PacifiCorp, told Clearing Up that the economic analysis is meant to be a guide to help prioritize which units may be candidates for earlier retirement and deserve further study.

"At this stage, no decision has been made. This is just a preliminary tool needed to take a step forward in the analysis," Link said.

PacifiCorp will now analyze the reliability impacts and replacement costs of retiring certain plants, using a "stacked analysis" that evaluates combinations of units for closure in 2022.

The study shows the "largest potential benefits" of earlier retirements coming from a cluster of three groups of power plants located in Utah, Colorado and Wyoming.

Closing Naughton units 1 and 2 and Jim Bridger Unit 1 in 2022 would yield, in a present value of revenue requirement, $301 million in benefits.

Shuttering Naughton 1 and 2, Hayden 1 and Bridger 1 in 2022 would create $307 million in savings. Retiring all these, plus Craig 2, in 2022 would yield $317 million in savings.

"One element we are focusing on now is that any portfolio or scenario has to, at a minimum, meet our reliability obligations," Link said. "We need to ensure that this is captured in our work; that is now our priority."

The release of the economic analysis comes in the wake of PacifiCorp asking regulators in Oregon, Washington, Idaho and California to accelerate the depreciation dates on many units in the fleet, and is seen by clean energy and environmental advocates as another brick in the road to PacifiCorp's shutting down much of its coal fleet.

PacifiCorp operates 72 generating facilities around the West, with a capacity of 10,900 MW. Coal makes up about 60 percent of the utility's generating portfolio. The analysis showed that 13 of the company's 22 coal units are more expensive than renewables or natural gas-fired alternatives and could be retired in 2022. However, Link cautioned that factoring in reliability and replacement costs could likely swing the analysis to show no benefits to early closure for some of the units.

Anne Hedges, co-director of the Montana Environmental Information Center, said the study is yet more proof that coal-fired generation is no longer economical.

"PacifiCorp is a beast in the region, they aren't doing this

for any progressive or environmental purposes," Hedges said. "What they do is based on numbers, and the numbers in this study are compelling and it's causing them to look at the future differently."

Jeremy Fisher, senior strategy and technical advisor with the Sierra Club, applauded the public release of the report and said it was just what the Sierra Club expected.

"It's the first indication that PacifiCorp is thinking the same way we are," Fisher said.

The Sierra Club pushed for the public release of the economic study in June when PacifiCorp revealed parts of it at a confidential meeting of IRP stakeholders in Oregon. PacifiCorp successfully blocked the release after WUTC signaled it would release the study.

Fisher described the public release of the analysis as "very positive" and was particularly encouraged that PacifiCorp will be modeling "non-natural gas alternatives."

The utility's economic analysis using the "stacked" clusters of plants shows the potential for earlier retirement of as much as 1,529 MW of coal generation. The utility already plans to retire 667 MW of coal by 2020, and 3,650 MW by 2036, according to the utility's 2017 IRP.

The economic analysis was released on the same day the U.S. Energy Information Administration released a report showing that U.S. coal consumption dropped 4 percent in 2018 to the lowest level since 1979.

Xcel Energy, which is a co-owner of the Hayden facility in Colorado, announced Dec. 3 that it was committed to going completely carbon -free by 2050 and 80 percent carbon-free by 2030.

"It's pretty obvious that PacifiCorp is seeing what everybody else around the country is seeing," Hedges said. "Coal is increasingly uneconomical and uncompetitive in the marketplace."

Hydro One, Avista to ask Wash. regulator to reconsider decision in merger case, Sania Khan Market Intelligence - SNL

Hydro One Ltd. and Avista Corp. plan to file a request with the Washington state utility regulator to reconsider its denial of the proposed $5.3 billion merger transaction.

In its Dec. 5 order denying approval of the deal, the state Utilities and Transportation Commission, or UTC, raised concerns about the Ontario government's control of Hydro One and concluded that the proposed takeover of the Spokane, Wash.-headquartered natural gas and electric utility is not in the public interest.

Hydro One was thrown into turmoil after the election of Premier Doug Ford, who brought wholesale changes to its board and senior management. The commission said the developments "elevated the provincial government's political interests above the interests of other stakeholders." Avista's shares tumbled as investors

worried that the deal "appears to now be in grave jeopardy."

The companies plan to file a petition for reconsideration of the commission's decision by Dec. 17. If the UTC does not act on the petition 20 days from the date of filing, the petition will deem to be denied.

The transaction already had received approvals from the Federal Energy Regulatory Commission, the U.S. Committee on Foreign Investment, the Federal Communications Commission, the Federal Trade Commission and regulators in Alaska and Montana. Decisions are still pending in Idahoand Oregon.

Chelan County PUD Wants Crypton Miners to Covert Costs, Risks in New Rates, Dan Catchpole – Clearing Up

Chelan County PUD commissioners adopted new rates for cryptocurrency, blockchain and similar high-density loads at their Dec. 3 meeting.

The new rates, fees and charges aim to have bitcoin miners and other qualifying customers carry the costs and risks of getting power from the utility.

The rates go into effect April 1, 2019, at which point the PUD will sta1t taking applications for new crypto currency operations. It has had a moratorium on such requests since March. It has been more than a year since the district was flooded with requests for service from high-density users hoping to cash in on bitcoin's soaring value, which has since deflated.

"We've taken the time needed for a careful look at the risks and costs involved, considered public comments gathered at a dozen meetings and arrived at a solution we believe protects existing PUD customers-owners and maintains opportunities for this emerging industry, " General Manager Steve Wright said during the Dec. 3 meeting in Wenatchee, Wash.

The new rates, fees and charges will let the PUD provide power to cryptocurrency operations, while insulating other customers from that industry's volatility and uncertainty, according to PUD staff.

If capacity is available, rates for neighborhood-based operations will be about 9 cents/kWh on April 1, and then go up to 10.5 cents/kWh a year later. Operations in commercial and industrial areas will pay a little more than 6 cents/kWh, if capacity is available.

The PUD commissioners stressed in comments during the meeting that they want to treat all sides fairly.

"It's important to point out that what we're really doing is being respectful of all," Commissioner Garry Arsenault said. "I'm looking for balance and to embrace the potential of this technology . . . but, we have to do it in a way that protects what we have."

Chelan will start reviewing applications received prior to the March moratorium over the next few months, and

consider new applications after the rates go into effect in April.

In 2017 and early 2018, the district received a flood of requests from would-be cryptocurrency miners and similar operations totaling more than 400 MW. That prompted the moratorium, which was extended several times since March.

The PUD already serves about 20 authorized cryptocurrency and similar high-density data operations, with a combined maximum load of 13.5 MW, according to the utility.

Earlier this year, it cracked down on unauthorized operations, which, according to Chelan PUD staff, can pose very serious public safety threats.

Grant County PUD adopted new rates earlier this year that also go into effect April 1, 2019.

The bitcoin-mining load across the Northwest was 38 aMW in 2017, according to analysis by the Northwest Power and Conservation Council earlier this year.

In new coal plant rule, US EPA reconsiders endangerment finding approach, **Zack Hale - SNL**

With its new proposal to ease restrictions on new coal-fired power plants, the U.S. Environmental Protection Agency is also contemplating a major change to how the Clean Air Act is used to curb harmful air pollution.

EPA Acting Administrator Andrew Wheeler on Dec. 6 unveiled a proposed rule that would lift the maximum limit on CO2 emissions from new and reconstructed fossil fuel-fired electric generators, revising a tougher limit set under the Obama administration. Issued in 2015 as a companion regulation to the Clean Power Plan, the Obama-era rule set a 1,400 pounds of CO2 per MWh limit on new and reconstructed coal-fired power plants, effectively requiring plant operators to install CO2-reducing technology known as carbon capture and storage, or CCS.

The EPA's new proposal would raise the limit on large coal-fired generating units to 1,900 pounds of CO2 per MWh and smaller units to 2,000 pounds. The rule would also determine that the best system of CO2 emission reduction for new coal-fired plant operators is to adopt the same technology already installed at the most efficient modern plants without CCS. However, a 2015 baseline study commissioned by the U.S. Department of Energy found that a state-of-the-art U.S. coal plant without CCS technology would emit 1,618 to 1,683 pounds of CO2 per MWh, far less than the limits being proposed.

In justifying the revisions, the EPA cited "high costs and limited geographic availability of CCS," similar to the arguments that were made against the Obama-era standard in a legal challenge by a coalition of electric utilities and states with significant coal-fired generation. The U.S. Court of Appeals for the District of Columbia

Circuit in August 2017 stayed the litigation indefinitely to give the Trump administration time to review the regulation, which, unlike the Clean Power Plan, went into effect after it was finalized. The Trump EPA is now in the midst of repealing and replacing the Clean Power Plan with the Affordable Clean Energy, or ACE, rule.

The EPA said in an economic impact analysis of its Dec. 6 proposed rule that it "is unlikely new coal-fired generation will be constructed" through 2026 if current trends in low natural gas prices extend into the future. As a result, the EPA is projecting that the policy will not lead to a significant increase in CO2 emissions.

However, the EPA's assumption regarding the future economic competitiveness of coal could change "as a result of changes in wholesale electricity markets, federal policy intervention including mechanisms to incorporate value for onsite fuel storage, or substantial shifts in energy prices," the agency said.

At a Dec. 6 press conference, Wheeler framed the policy proposal as a way to reinvigorate American ingenuity in developing clean coal technology, claiming the proposal will allow the U.S. to export new technologies to developing nations with growing coal-fired generation. "By replacing onerous regulations with high, yet achievable, standards, we can continue America's historic energy production, keep energy prices affordable, and encourage new investments in cutting-edge technology that can then be exported around the world," he said.

Environmental groups, however, called the EPA's proposal particularly disturbing in the wake of multiple scientific reports from the United Nationsand the U.S. federal government warning of disastrous consequences if global CO2 emissions do not begin to sharply fall. "This is especially distressing since several new groundbreaking reports were recently released which warn the world about the growing dangers of the climate crisis and its catastrophic implications," Mary Anne Hitt, senior director of the Sierra Club's Beyond Coal campaign, said Dec. 6 in a statement.

Seeking comment on regulating GHGs

As part of the proposal, the EPA in a significant footnote revealed that is also considering a major change to its longstanding approach to regulating power plants.

Since the 1970s, electric generators have been regulated under Section 111 of the Clean Air Act, which requires the EPA to develop performance standards for categories of sources of air pollution that "may reasonably be anticipated to endanger public health or welfare." In the EPA's 2015 rule, the agency interpreted the statute to require a so-called "endangerment finding" to be made at the time the EPA lists a source category under Section 111, adding that an additional endangerment finding is not necessary to regulate a new pollutant from a source category that has already been listed.

The new proposal said the Trump EPA will consider comments "on the correctness of the EPA's interpretations

and determinations and whether there are alternative interpretations that may be permissible, either as a general matter or specifically as applied" to greenhouse gas emissions. For example, the agency said it wants feedback on whether the statute requires it to make a new endangerment finding each time the agency regulates an additional pollutant by an already-listed source category.

Perhaps even more significantly, the EPA said will consider comments on whether greenhouse gas emissions "are different in salient respects from traditional emissions such that it would be appropriate to conduct a new 'endangerment finding' with respect to GHG emissions from a previously listed source category." In addition, the EPA wants to know if it has "a rational basis" for regulating CO2 emissions from new coal-fired power plants or for declining to do so at this time given "ongoing and projected power sector trends that have reduced CO2 emissions from the power sector."

"They seem to be opening the door to this question of whether they need to make a new finding every time they regulate a new pollutant, which has never been done over the past 40 to 50 years," said Jay Duffy, an attorney with the Clean Air Task Force. "Regardless, even opening the door to the idea that CO2 emissions from power plants do not endanger public health is utterly indefensible."

But Jeff Holmstead, former head of the Office of Air and Radiation in the George W. Bush administration, said seeking comment on how to regulate pollutants under Section 111 makes sense. "I wouldn't read too much into this footnote," he said in a Dec. 6 email, noting the same issues came up in the litigation over the Clean Power Plan. "As a matter of administrative law, the folks at EPA will be better positioned to defend the rule if they have allowed for public comment on these issues."

Democrats say permanent clean energy credits must be in US infrastructure plan, Molly Christian - SNL

U.S. Senate Democratic Leader Chuck Schumer told President Donald Trump that permanent tax incentives for "clean electricity" and energy storage must be included in any infrastructure package considered in 2019.

The request comes as Democrats, who are set to take control of the U.S. House of Representatives, hope to roll out a potential infrastructure bill in the new Congress that starts in early January. Upgrading the country's infrastructure has been a policy priority for Republicans and Democrats, although they have differed on funding and which projects to prioritize.

One area Democrats are keen to focus on in an infrastructure package is climate change, both in terms of lowering greenhouse gas emissions and mitigation, Schumer said in a Dec. 6 letter to Trump. The party's call to address climate change has intensified amid devastating hurricanes and wildfires in recent years and after 13 U.S. federal agencies released a national climate assessment Nov. 23 that anticipated severe

economic costs from global warming.

"It is crucial that we immediately enact legislation to combat climate change and create millions of jobs," the letter said. "Therefore, any infrastructure package considered in 2019 must include policies and funding to transition to a clean energy economy and mitigate the risks that the United States is already facing due to climate change."

At the top of Schumer's list of policies that should go into an infrastructure plan are permanent tax incentives for domestic production of clean electricity and storage, electric vehicles, energy efficient homes and buildings, and modernizing "the electric grid."

Any infrastructure plan must also invest in electric storage and transmission to expand renewable energy dispatch and in smart-grid and microgrid technology, Schumer added. He also called for substantial increases in funding for research, development and deployment of "next-generation" clean energy technologies, energy efficiency, storage and carbon dioxide reduction. He lastly called for policies to reduce methane emissions as a byproduct of domestic energy production.

Invoking a progressive movement afoot in Congress, Schumer closed out by saying the impacts of climate change would worsen without "decisive and immediate action to transition to a 100-percent clean energy economy."

Schumer's office did not respond to questions about the specific energy tax incentives he would like to be made permanent. In late 2015, President Barack Obama signed legislation that included a five-year phase-out of the wind production tax credit but extended eligibility to projects that start construction by Jan. 1, 2020, from a prior cutoff of Jan. 1, 2015. The bill also extended the federal investment tax credit, or ITC, for large-scale solar power facilities, which will gradually decline until hitting 10% permanently for projects that begin construction after 2021.

Since then, Congress has also worked to extend tax credits for new nuclear plants and smaller-scale renewable energy technologies, some of which were extended through a budget bill signed into law in February. The House Committee on Ways and Means also introduced legislation in late November that contained one-year extensions to other renewable tax credits, but the proposal excluded an ITC for stand-alone energy storage facilities.

Proponents, however, hope to see a storage ITC added to appropriations measures Congress must pass before the end of 2018 or in future legislation next Congress.

On the same day Schumer wrote to Trump about his infrastructure priorities, a group of nearly 70 solar power companies visited Capitol Hill to meet with lawmakers on their goals. One of the companies' top priorities was for Congress to modify the U.S. tax code to make storage eligible for the ITC, according to a press release from the Solar Energy Industries Association.

But the Trump administration may not be receptive to making tax codes permanent for renewable energy and electric vehicles. Larry Kudlow, director of the National Economic Council, said recently that the White House wanted to end incentives for electric car purchases and terminate subsidies for renewable energy. Congress, however, would need to draft and approve such changes.

Energy tax extenders dropped from US House panel's end-of-year tax bill, Molly Christian - SNL

Republicans in the U.S. House of Representatives removed one-year tax credit extensions for several renewable energy technologies from an end-of-2018 tax bill. But extensions to those credits could be included in other legislation that Congress must pass before the end of December, a key lawmaker and industry sources said.

The retooled tax package, which House Ways and Means Committee Chairman Kevin Brady, R-Texas, released Dec. 10, updated a proposal the committee introduced in late November. The prior version of the bill sought to modify Section 45(d) of the U.S. tax code to extend construction deadlines by one year — to Jan. 1, 2019 — for certain renewable electric generating technologies to qualify for a federal production tax credit. The extensions would have applied to open- and closed-loop biomass technologies, geothermal energy, landfill gas, and municipal solid waste energy facilities, and to incremental hydropower and marine and hydrokinetic renewable energy facilities.

The bill did not alter federal tax credits for large-scale wind and solar power plants, which were extended in late 2015.

Brady said he removed the extensions because he was "looking for signals" from the U.S. Senate and House Democrats on their intentions for their credits. But Brady was "hopeful" tax credit extensions could be added to other legislation before the end of 2018. "We certainly think that's important to do," he told reporters.

In a Dec. 11 research note, Height Securities LLC said the tax extenders "are still likely to get their day" as part of spending legislation that Congress must pass before Dec. 21 to fund many federal agencies.

The development could give renewable energy proponents a chance for a better deal. Renewable power industry groups were unhappy the extensions would have only been for one year and that the original version of Brady's bill excluded a federal investment tax credit, or ITC, for stand-alone energy storage projects.

Even if the energy tax credit extensions and storage ITC do not make their way into legislation in 2018, Democratic leaders could try to attach those and other clean energy tax incentives to a possible infrastructure bill in the next Congress.

Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 12/28/2018 10:22:28 AM

To: Aldis.Raisters@gapac.com; kwilson@legadv.com; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser com; mary.mccordic@shell.com; mruckwardt@schn.com; Samuel.Liebelt@kapstonepaper.com; todd.wiseman@solvay.com; tom@richlandpaper.com; Wes.Hill@gapac.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; kmoyer@energystrat.com; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Amy Beck <amy.beck2@boeing.com>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Brad Beavers <bbeavers@timberproducts.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@nippondynawave.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Charley Hathaway <charley.hathaway@nwpsllc.com>; Charley <[redacted]>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Courtney Smith <courtney.smith@shell.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Dan Coyne <dancoyne@coynenet.com>; David Barge <DABarge@marathonpetroleum.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Tobin <DavidTobin@boisepaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Fawn Barrie <fbarrie@legadv.com>; Graham Bailey <graham.bailey@nippondynawave.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft.com>; John Bob <John.Bob@am.dynonobel.com>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.org>; Mark Nelson <pacounsel@pacounsel.rog>; Mark Steele <steele@norpac.com>; Mark Steele <Mark.Steele@norpac.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@rocktenn.com>; Michael Kuhn <mike.kuhn@westrock.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Kaiser, Nick <Nick.Kaiser@nippondynawave.com>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <PLydon@lhs.org>; Pat Ortiz <Patrick.Ortiz@kapstonepaper.com>; Paul Langley; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Sandi Swarthout <sswarthout@capconn.net>; Scott Hawley <SRHawley@marathonpetroleum.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steven Castracane <steven.castracane@linde.com>; Steve Wood <S.Wood@resolutefp.com>; Tim Boyd <[redacted]; Tom Yarborough <Tom.yarborough@weyerhaeuser.com>; Tony Hardenbrook; Tyler Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Bill Gilmore <billmg@penwool.com>; Chad Stokes <cstokes@cablehuston.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Ed Coghlan <Ed.coghlan@onsemi.com>; Jake Evans <Jake evans@onsemi.com>; Jared Sommer <sommerj@byui.edu>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kyle Williams <williamsk@byui.edu>; Nick Avenetti <nick@perlite.com>; Rick Stricker <rstricker@baf.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Sam Merrick <merricks@byui.edu>; Sharon Andersen <Sharon.w.anderson@intel.com>; Steve O'Brien <sobrien@baf.com>; Tommy Brooks <tbrooks@cablehuston.com>; Chuck Gates [redacted] Nancy Holbrook <Nancy.Holbrook@bp.com>; Nancy Hollbrook <Nancy.Richardson@bp.com>; Robert Pierce <robert.pierce@shell.com>; Rusty Williams <williwk@bp.com>; Scott Gutting <sgutting@energystrat.com>; Jeff Burks <jburks@energystrat.com>; Jeff Fishman <jfishman@energystrat.com>

Cc: John Carr <jcarr@awec.solutions>; Ed Finklea <efinklea@awec.solutions>

Subject: AWEC December 2018 Newsletter

Attachments: AWEC December 2018 Newsletter.pdf

AWEC members,

Please find the Alliance of Western Energy Consumers' newsletter attached for December 2018. Our staff wish you a safe and happy New Year.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

Alliance of Western Energy Consumers
Monthly Energy Update

FERC Proposes to Scrap Power Screens for Some Market-Based Rate-Sellers
Page 7

For information, contact AWEC at 971.544.7169

IN THIS ISSUE:

December 2018

OPUC Authorizes Modest Rate Increase for PGE

The Oregon PUC on Dec. 14 approved four previous settlements and resolved five separate contested issues that will give Portland General Electric (PGE) a small overall rate increase, effective Jan. 1, 2019.

PGE originally proposed an $85.9-million, 4.8-percent revenue increase. The commission's decision reduced this by more than $53 million, to a 1. 8-percent, $32.7-million increase in revenues.

The rate impact to customers will be lower because an updated forecast of overall power use means the effective change in rates will result in an $8.96-million, 0.5-percent increase in revenues.

Commercial customers' rates will go up 2.5 percent, while larger industrial customers' rates will decrease 2.1 percent.

The need for a revenue increase is largely driven by upgrades to PGE's transmission and distribution network, and to accommodate customer growth. Additionally, PGE is investing in new technology to improve customer services and increase grid security.

August parties to the case agreed to a series of settlements that covered PGE's revenue requirements and power costs; but differences remained over the utility's direct access policy, storm recovery costs, load forecasts, decoupling, and renewable automatic adjustment clause.

PGE's modest rate increase is helping to fund important investments for the old and the new," Megan Decker, OPUC chair, said in a prepared statement. "With this revenue PGE will keep its traditional service infrastructure up-to-date, and will make the system more secure against growing cybersecurity threats. Both investments are essential to a modem system that serves the needs of customers."

During the course of this proceeding, several settlements were filed. The PUC's decision adopts the settlements and addresses several contested issues, the resolution of which allows for the company to use energy storage associated with renewables in the renewable automatic adjustment clause and use trended weather in its load forecast.

The PUC rejected PGE's proposal to use a major storm balancing account. Regarding PGE's decoupling proposal, the PUC accepted the proposal to move large nonresidential customers under the fixed cost-recovery true-up mechanism from a lost revenue recovery adjustment to a sales normalization adjustment.

Oregon's 2018 Biennial Report Highlights Need for Climate Change Legislation

With climate change already underway in Oregon and despite a reduction in carbon emissions from the utility sector, carbon emissions in the state are on the rise, according to the Oregon Global Warming Commission's 2018 Biennial Report to the Legislature.

The report, which was released Dec. 13, paints a grim picture of the impacts a warming climate is already having on Oregon and highlights the need for further legislation to address climate change.

The report is usually prepared in odd-numbered years, but was published in 2018 in advance of the 2019 legislative session to "arm legislators with the most current data about greenhouse gas emissions in the state, " Angus Duncan, chair of the commission, said in a statement.

A carbon emissions cap-and-trade bill is expected to be introduced in the Oregon Legislature when the session opens in February.

According to a preliminary report from the Oregon Department of Environmental Quality, the state emitted about 64 million metric tons of carbon dioxide-equivalent (MTCO2e) in 2017, reversing a slight decrease in 2016 and returning to approximately the same level recorded in 2015.

"This level is well above the state's goal of 51 million MTCO2e by 2020 and the commission's adopted interim goal of 32.7 million MTCO2e by 2035, and it does not put Oregon on a path toward achieving its long-term goal of 14 million MTCO2e by 2050," the report said.

Only the utility sector shows a decrease in greenhouse gas (GHG) emissions. From 2014 to 2016, emissions from electricity use decreased from 30 percent to 26 percent of the total emissions, according to the report. New projections from Portland General Electric and PacifiCorp indicate that by 2050 they expect to achieve emissions reductions of at least 80 percent below their 2005 levels.

This "reflects both steep declines in the cost of renewable generation and the anticipated outcomes of recent changes to state laws that will displace coal generation and require new renewables. Adopting an economy-wide GHG emissions cap, in addition to ensuring continued investment in energy efficiency and renewables, would lock in these electricity-sector reductions," the report says.

Emissions from natural gas use are expected to remain at their current levels of about 11 percent to 14 percent of total sector-based GHG emissions, unless additional actions are taken to reduce the carbon intensity of natural gas, the report says. It notes that NW Natural Gas, Oregon's largest natural gas utility, has a GHG reduction goal of 30 percent from 2015 levels by 2035.

Forest management and harvest practices also show positive signs of capturing and holding carbon emissions, with approximately 11 billion tons of carbon dioxide-equivalent packed into Oregon forests today. The report shows that this is increasing to somewhere between 15 million and 60 million tons CO2e annually.

But while emissions from the utility sector and the potential of Oregon's forests to capture carbon provided some positive advance, the rest of the report does not.

Oregon's transportation sector and the post-recession consumption of "goods and services" are driving the emissions increase, and will likely prove to be much tougher to address.

Transportation GHG emissions have risen during each of the past three years and have grown from 35 percent of state-wide totals in 2014 to 39 percent in 2016, the report says.

The state's consumption-based emissions show a steady rise, with approximately 61 million MTCO2e in 1990, 79.6 million MTCO2e in 2005, 80.2 million MTCO2e in 2010 and 89 million MTCO2e in 2015.

(Continued on Page 3)

(Continued from Page 2)

Nearly two-thirds of Oregon's consumption-based emissions are associated with five categories: vehicles, food and beverages, appliances, services, and construction, the report said. Household demand is overwhelmingly the driver of consumption-based emissions.

In 2018 the State of Oregon failed to pass a cap-and–trade program. However, the new joint committee appointed is looking at carbon issues to design a proposed cap-and-trade proposal for 2019.

Washington PUDs Tighten 2019 Budgets in Response to BPA Costs

Washington publically-owned utilities have reduced operating and capital projects to cut back on rate increases that would pass those costs onto customers in 2019.

Most cite rising Bonneville Power Administration (BPA) costs as the reason for trimming their budgets. Seven utilities expect slight load growth in 2019, while the largest PUD, Seattle City Light, (SCL) expects load to decline.

Ten utilities have already approved raising rates in 2019, with a few having a proposed rate increase in front of their commissioners for approval. Six PUDs have no rate increase planned in their budgets and no utilities plan for a rate decrease.

- SCL has the largest rate increase for 2019 at 5.8%.
- Lewis County has proposed a 5% increase to its Board.
- Clallam County has approved a 3.8% in crease.
- Grays Harbor has approved a 2.5% in crease.
- Benton County has proposed a 2.4% increase to its Board.
- Grant County has approved a 2% rate increase.
- Tacoma Power has approved a 2% rate increase.
- Snohomish County has approved a 1.3% rate increase.

Chelan County, Clark Public Utilities, Cowlitz County, Franklin County, and Mason County PUDs have proposed no rate increases in 2019.

CAISO Floats a Plan to Give EIM Members More Say In Governance

The California Independent System Operator Corp. is floating a plan to give the members of the Western energy imbalance market (EIM) more say in governance by giving the governing body the first vote on certain rule changes before the rules go to the CAISO board and federal regulators for approval.

The change is significant because the governance of the EIM has been an issue during the expansion of the regional energy market. Some participants in neighboring states have worried that market rules might favor California interests over their own.

Currently, the EIM only takes the lead on EIM-specific rules. The new proposal would expand the authority of the EIM governing body so that it has primary authority over real-time market changes that apply generally but are driven by the needs of the EIM.

Primary authority means that a tariff amendment must be approved by the EIM governing body before it goes to the CAISO board and the Federal Energy Regulatory Commission for approval.

This approach would have the benefit of

(Continued on Page 4)

(Continued from Page 3)

ensuring that the governing authority with the greatest substantive interest in the matter plays the lead role in deciding whether to approve a filing with FERC to implement the change," CAISO said in its straw proposal.

The CAISO board would continue to have a role because matters that are within the primary authority of the EIM governing body still must be approved by the board, according to the proposal released Dec. 14.

`The ISO currently plans on bringing the proposal to the EIM governing body in March 2019 and to the CAISO board shortly thereafter.

CAISO is also planning a broader EIM governance review could touch on issues like whether it should be harder for the CAISO board to change the EIM charter and guidance document, and whether the EIM stakeholder process should be revised.

EIM members are encouraged by the idea of taking early action on the designation of authority, Carl Linvill, vice chair of the EIM governing body, told the CAISO board of directors on Dec. 13. But EIM stakeholders want to be sure that any early action does not limit the long-term governance review, he told the board at their general session.

"We hear that we should keep our eye on the long-term ball, on how things will eventually be structured and how the EIM will eventually best serve the region," Linvill said.

Northwest Takes a Look at Increasing TOU Rates

Currently, few utilities in America aggressively employ time-of-use rates, and nationally, if a utility does offer TOU rates, only about 3 percent of customers are enrolled.

That level is even lower in the Northwest where only 0.7 percent of customers are enrolled in TOU rates if they are available.

NW Index Prices	Dec 2018	Nov 2018	Dec 2017
PGE Malin	$6.03	$3.55	$2.87
Kern River	$5.87	$3.23	$2.79
Northwest Pipeline	$3.23	$3.23	$2.63
NYMEX Futures Settlement	$5.175	$3.185	$3.074

In the U.S., 2.2 million residential customers are enrolled in TOU rates. This is 1.7 percent of all residential customers and 3.4 percent of customers of utilities offering TOU rates, according to The Brattle Group's analysis of U.S. Energy Information Administration data.

That number is even smaller in the Northwest as only 19,500 customers are enrolled. This is 0.3 percent of all customers in the region, comprising 16,290 residential customers, 1,099 commercial and 2,105 industrial, according to an analysis by Clearing Up.

However, Portland General Electric plans to incorporate TOU rates in the smart grid test bid it will launch in 2019. The pilot program will involve more than 20,000 customers in Hillsboro, Portland and Milwaukie, in Oregon.

PacifiCorp has the highest number of TOU customers among Northwest utilities. In Idaho, it had 11,602 customers enrolled in TOU rates in 2017, according to the EIA data. That represented 15 percent of its 77,623 customers in that state.

Despite the low number of enrolled customers, TOU rates are getting more attention nationally and regionally. The Brattle Group identified several trends in a recent report on residential TOU rates, including that pilot programs consistently find customers shift consumption to off-peak periods when they have TOU rates.

TOU rates also help address solar integration challenges by setting low mid-day prices and higher rates during peak period later in the

(Continued on Page 5)

(Continued from Page 4)

evening.

Also, volumetric TOU rates have been used to address fixed-cost recovery issues associated with rooftop solar, in lieu of fixed or demand charges.

New Study on Drought Quantifies Impact on Western States

The impact of droughts on generation has been measured by a new study done by Stanford University. During a drought, due to a deficiency in hydropower, the western U.S. states tend to increase power generation, as well as emissions, from fossil fuels, resulting in an increase in emissions of harmful air pollutants and carbon dioxide from power generation plants in various western U.S. states.

The study shows that from 2001 to 2015, nearly 10% of the average annual carbon dioxide emissions from power generation in California, Idaho, Oregon, and Washington was caused by droughts.

According to the study, which was reported in the December 21st, 2018, issue of *Environmental Research Letters*, emissions of sulfur dioxide and nitrogen oxides—air pollutants that could cause lung irritation and lead to acid rain and smog—also increased in certain states due to droughts.

Some of the predominant increases in sulfur dioxide occurred in Colorado, Utah, Washington, and Wyoming. The most significant increases in nitrogen oxides took place in California, Colorado, Oregon, Utah, Washington, and Wyoming.

The western United States is a perfect testing ground for perceiving the relationships between droughts and emissions from the power sector, the study notes.

Apart from the immense data from recent droughts, the scientists were able to explore how emissions vary with different types of back-up power plants since states across the area have a range of energy mixes.

Water is used in electricity generation, both directly for hydropower and indirectly for cooling in thermoelectric power plants.

The study finds that in a number of western states where hydropower plays a key role in the clean energy portfolio, droughts cause an increase in emissions as natural gas or coal-fired power plants are brought online to pick up the slack when water for hydropower comes up short," noted Noah Diffenbaugh, Professor, Stanford Earth.

For California, Oregon and Washington, which generate a lot of hydropower, the drought-induced increases in carbon dioxide emissions represent substantial fractions of their Clean Power Plan targets.

Colorado also tends to increase coal-fired power plants when there is a decline in hydropower, whereas California and Idaho ramp up power generation from natural gas.

Oregon, Washington, and Wyoming tend to ramp up both. In Wyoming and Montana, coal generation is partially increased so that the electricity can be exported to adjacent states that are also experiencing decreases in power generation as a result of drought.

NATIONAL NEWS

States and Enviros Spar with EPA Over 2015 Ozone Standards in Court

Lawyers for the U.S. Environmental Protection Agency on Dec. 18 attempted to refute arguments targeting the latest national standard for ground-level ozone pollution amid a legal challenge from environmental groups, industry interests and some mostly conservative states.

A three-judge panel for the U.S. Court of Appeals for the District of Columbia Circuit heard long-awaited oral arguments in a complex case that dates back to October 2015, when the EPA strengthened the National Ambient Air Quality Standards, or NAAQS, for ground-level ozone.

Ground level ozone, the main ingredient in smog, is formed when volatile organic compounds and nitrogen oxides emitted from sources such as power plants, industrial facilities and motor vehicles chemically react in the presence of sunlight. If certain areas within a state exceed the NAAQS, states are required under the Clean Air Act to submit cleanup plans to the EPA that can trigger the need for new sources of emissions to install additional pollution controls.

In revising the primary and secondary ozone standards to 70 parts per billion — down from the previous level of 75 ppb — in 2015, former EPA Administrator Gina McCarthy insisted that the science to support an even more stringent level was too uncertain.

Nevertheless, environmental groups including the Sierra Club and Earthjustice challenged the standard at the D.C. Circuit, arguing that the EPA dismissed advice from its Clean Air Scientific Advisory Committee and set the new level of acceptable ozone pollution too high to adequately protect sensitive populations.

While environmental groups argued that the 2015 ozone standard was too weak, coal mining company Murray Energy Corp. asserted that the rule was too stringent, as did a coalition of states led by Arizona. The challenges ultimately were consolidated, and the D.C. Circuit in April 2017 placed the litigation on hold to give the Trump administration time to review the 2015 ozone standard.

More than a year later, however, the EPA said it does not intend to revisit the standard, placing the agency at odds with Murray Energy CEO Bob Murray — one of President Donald Trump's biggest supporters. The court then lifted the abeyance, which led to the EPA defending the standard against multiple lines of attack during the Dec. 18 oral arguments in *Murray Energy Corp. v. EPA*.

Arguing on behalf of state petitioners, Arizona Solicitor General Dominic Draye asserted that the EPA in setting the new standard inappropriately focused on average, rather than peak, contributions of background ozone — ozone formed from natural sources such as wildfires.

That presents a problem, he argued, because nonattainment is triggered by an area's fourth-worst eight-hour reading for ozone instead of its months-long average over the ozone season.

Under the 2015 standard, areas within Intermountain West and upper Midwest states with background levels of ozone that account for 70%-80% of total levels will be unfairly subjected to onerous permitting requirements that can stifle economic growth, Draye said.

However, Judge Thomas Griffith challenged Draye by asking him whether the Clean Air Act requires the EPA to consider background ozone when establishing the NAAQS. In doing so, Griffith noted that the statute contains at least three provisions that allow the agency and states to account for background ozone from interstate and international transport when implementing the NAAQS.

That "suggests that's where you pay attention to background ozone … that it's not necessary to do so when you're establishing the NAAQS in the first instance," he said.

Judge Nina Pollard similarly expressed skepticism about the states' argument on background ozone. “The dominant goal of the statute … is to set levels that protect the public health.”

FERC Proposes to Scrap Power Screens for Some Market-Based Rate-Sellers

The Federal Energy Regulatory Commission on Dec. 20 proposed to revise its policies for granting the right to make sales at market-based rates.

Under the proposal, entities seeking to obtain or retain authority to make market-based rate sales in regions with energy, ancillary services and capacity markets subject to FERC-approved monitoring and mitigation by a regional transmission organization or independent system operator — i.e., those currently operated by the ISO New England, New York ISO, PJM Interconnection and Midcontinent ISO — would no longer have to submit indicative horizontal market power screens.

"The existence of market power mitigation in an organized market generally results in a market where prices are transparent, which disciplines forward and bilateral markets by revealing a benchmark price, keeping offers competitive," FERC explained in the notice of proposed rulemaking, or NOPR.

But since some RTO/ISOs — currently, the California ISO and the Southwest Power Pool — do not operate centralized capacity markets and therefore cannot act to mitigate capacity sales, those seeking to sell capacity at market-based rates in those regions would still be required to submit both indicative screens for assessing horizontal market power.

Entities, however, would be relieved of the requirement to submit those screens "if their market-based rate authority is limited to wholesale sales of energy and ancillary services," according to the NOPR.

FERC Chairman Neil Chatterjee praised the move during the agency's Dec. 20 regular open meeting. He noted that the commission "has long relied on RTO and ISO market monitoring and mitigation to address any market power concern" and called the proposal "a common-sense change that will reduce regulatory burdens without diminishing protections for ratepayers."

"I think this is a small but important step toward streamlining our market-based rate program," Chatterjee said.

While Commissioner Richard Glick agreed that eliminating unnecessary burdens imposed on jurisdictional utilities is important, he also said the NOPR "highlights the essential role that robust market mitigation plays" in protecting against market power abuses.

"I look forward to reviewing the comments that are submitted in this proceeding to consider whether there are additional measures the commission or regions could adopt to offer added protections," Glick said.

Under the commission's existing market-based rate policies, which largely were codified in 2007 in Order 697, market participants seeking to obtain or retain market-based rate authority generally are required to submit pivotal supplier and wholesale market share screens.

Entities that fail one or both indicative screens are presumed to have market power and are given three choices: accept the presumption and mitigate the market power, agree to sell power at cost-based rates, or submit a delivered price test or other evidence to rebut the presumption.

FERC in 2014 attempted to make a similar change to the one outlined in the Dec. 20 proposal but that effort was shelved the following year after some stakeholders, including the American Public Power Association and the National Rural Electric Cooperative Association, strongly opposedthe move. FERC explained at the time, however, that it was preserving the record on the matter for possible later consideration.

In its latest NOPR, FERC explained that its new proposal differs from the earlier one in "some material respects."

Among other things, the commission noted that all market-based rate sellers, even those exempted from submitting the indicative screens, still would be subject to other regulatory requirements, including those related to initial applications, changes in status and triennial updates. FERC also said it would eliminate for RTOs and ISOs

(Continued on Page 8)

(Continued from Page 7)

that lack organized capacity markets the general rebuttable presumption established in 2007 that approved monitoring and mitigation measures sufficiently addresses any horizontal market power concerns regarding capacity sales.

FERC explained that the new exemption would apply to market-based rate sellers entering into bilateral transactions because although those transactions are not subject to monitoring and mitigation, "if RTO/ISO energy (e.g., day-ahead and real-time) markets and capacity markets are competitive, and commission-approved monitoring and mitigation sufficiently protect against the exercise of market power in these markets, then bilateral markets for the same product should also be competitive."

According to the NOPR, the move is expected to save market participants a total of approximately $2.2 million annually. Comments on the proposal are due 45 days after its publication in the Federal Register.

US Renewables Expected to Grow in Value in 2019

After a strong 2018, the U.S. renewable energy sector is expected to see its value to the grid, companies and customers grow in 2019, according to a recent outlook from consulting firm Deloitte.

Federal and state mandates, a growing investor base and technology advancements will be three new drivers to push clean energy costs down and boost renewables' value, said Marlene Motyka, Deloitte's U.S. and global renewable energy leader and principal for Deloitte Transactions and Business Analytics LLP.

The sector will still see some familiar issues in the new year, for example, as solar and wind project developers race to have their energy facilities qualify for their respective tax credits before they drop down in value in 2020.

"In 2018, the U.S. renewable energy sector remained remarkably resilient, gaining ground despite uncertainty about the effects of federal tax reform legislation and a spate of new import tariffs," Motyka said in Deloitte's 2019 renewable energy industry outlook. "Output from utility-scale wind and solar capacity topped 8% of total U.S. electricity generation through the third quarter of 2018, compared with 7% for the same period in 2017."

Policy support will particularly be essential for energy storage and offshore wind development. The Federal Energy Regulatory Commission's Feb. 15 order to have regional transmission organizations and independent system operators create market rules to improve energy storage resources' grid participation and more state mandates will help fuel battery storage deployment in 2019.

But as more states embracing solar-plus-storage projects, Motyka said hybrid projects' growing grid presence may require greater coordination from federal and state regulators. Meanwhile, both federal and state governments are embracing offshore wind as integral to the grid through additional lease sales, research and development funding and flexibility in permitting.

Established corporations such as Alphabet Inc. and Apple Inc. have been the center of the attention around corporate procurement, where non-utility customers buy clean energy through power purchase agreements or offset fossil fuel usage with renewable energy certificates. Going into 2019, Deloitte predicts renewables will be a more attractive investment to a wider range of parties, such as smaller corporate buyers, oil and gas companies and asset management firms.

"Larger companies are joining with smaller companies to develop new wind and solar projects," Motyka said. "One global technology giant designed a procurement instrument to reduce weather-related risks from renewables, making them a safer investment for 'small' corporate buyers. And some large corporations have also started imposing sustainability standards on their supply chain participants, a trend that brings more companies into the market and is expected to grow in the future."

Both utilities and households are expected to reap the benefits from technology in

(Continued on Page 9)

(Continued from Page 8)

2019. Digital solutions at the distribution level and behind the meter are starting to emerge in the electricity sector, such as more peer-to-peer renewable energy trading, tracking renewable energy credits' history and paying for electric vehicle charging on blockchain.

While renewable energy growth is looking good for 2019, there are still some headwinds from 2018 that will carry over into the new year, Deloitte said. Project developers will keep an eye on federal trade policy, specifically with the 30% import tariff on crystalline-silicon solar cells and modules, and the duties on imported steel and aluminum.

The solar tariff is scheduled to decline in value by 5% annually before phasing out after 2021 and may particularly hurt the development project pipeline for utility-scale solar plants. According to Deloitte, steel and aluminum tariffs could increase the levelized cost of energy for new U.S. renewable plants by 3% to 5%, but the exclusions on finished goods and the exemptions for Mexico and Canada may mitigate the tariffs' effect.

Gas Share in Electricity Generation Climbs

Electricity powered by natural gas grew year over year in October, as generation from all other fuel groups declined.

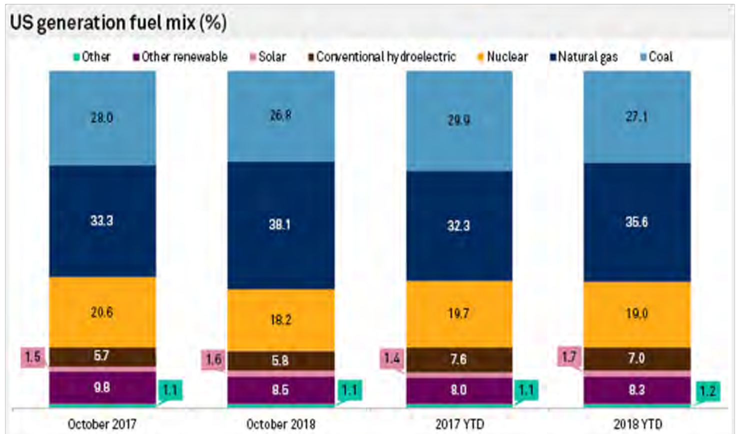
According to the U.S. Energy Information Administration's latest "Electric Power Monthly" released Dec. 26, utility-scale generation net of hydroelectric pumped storage increased 1.6% year over year in October to 325.9 million MWh.

Over the same period, gas-fired generation climbed 16.1% to 124.0 million MWh, accounting for 38.1% of the net total. Meanwhile, coal-fired generation declined 2.6% versus the prior-year period to 87.5 million MWh, to account for 26.8% of the nation's electricity.

Renewable output declined 5.7% year-over-year to 51.6 million MWh as growth among renewable resources was mixed.

Year-to-date through October, utility-scale generation climbed 4.4% to 3.53 billion MWh, with coal supplying 27.1% of the nation's power and natural gas at a 35.6% share. So far, renewable generation has supplied 17.0% of the nation's power, even with a year earlier.

Over the same period, coal-fired generation declined 5.1% year-over-year to 956.6 million MWh, while gas-fired generation climbed 15.2% to 1.26 billion MWh. Meanwhile, renewable generation grew 4.3% to 599.4 million MWh.



US generation by fuel type (million MWh)

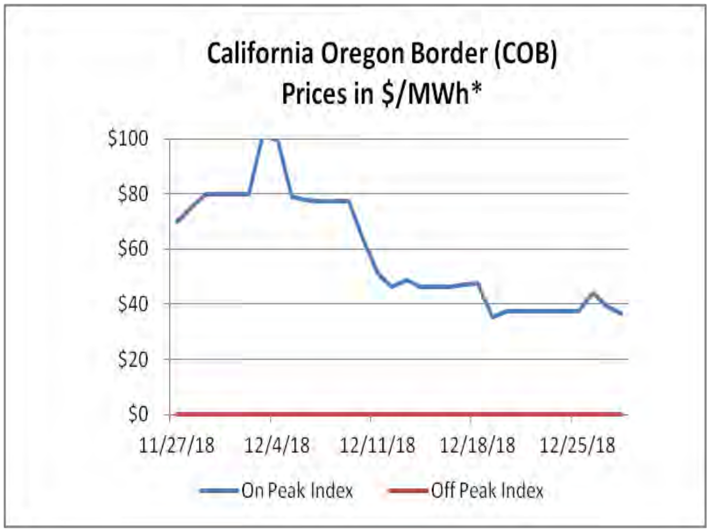
	October 2018	YOY change	YOY change (%)	2018 YTD	YOY change	YOY change (%)
Coal	87.5	-2.3	-2.6	956.6	-51.7	-5.1
Natural gas	124.0	17.2	16.1	1,256.2	166.0	15.2
Nuclear	59.4	-6.6	-10.0	671.5	6.8	1.0
Conventional hydroelectric	18.8	0.5	2.7	245.8	-11.6	-4.5
Solar	5.2	0.4	8.4	59.5	13.0	28.0
Other renewable	27.6	-4.0	-12.7	294.1	23.4	8.7
Total renewable	51.6	-3.1	-5.7	599.4	24.9	4.3
Other	3.5	-0.1	-1.7	41.9	3.6	9.5
Hydroelectric pumped storage	-0.5			-5.0		
Utility-scale generation, net of pumped storage	325.9	5.1	1.6	3,525.5	149.6	4.4

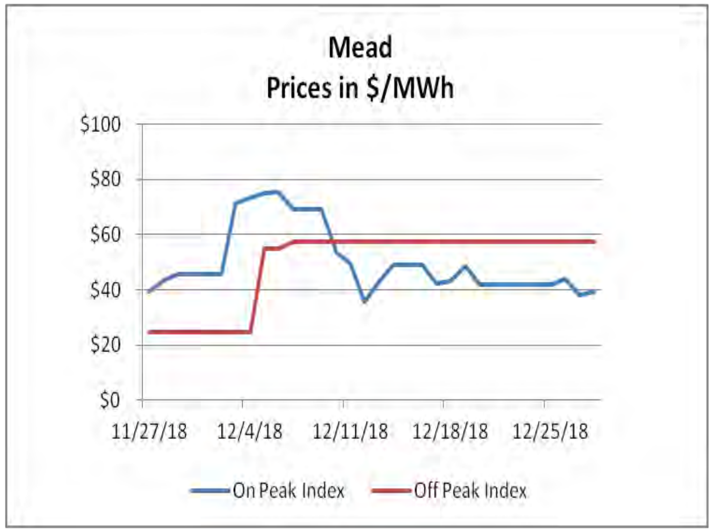
As of Dec. 26, 2018.
"Other renewable" includes wood, black liquor, other wood waste, biogenic municipal solid waste, landfill gas, sludge waste, agriculture byproducts, other biomass, geothermal and wind.
"Other" includes petroleum liquids, petroleum coke, blast furnace gas, manufactured and waste gases derived from fossil fuels, nonbiogenic municipal solid waste, batteries, hydrogen, purchased steam, sulfur, tire-derived fuel and other miscellaneous energy sources.
Source: U.S. Energy Information Administration

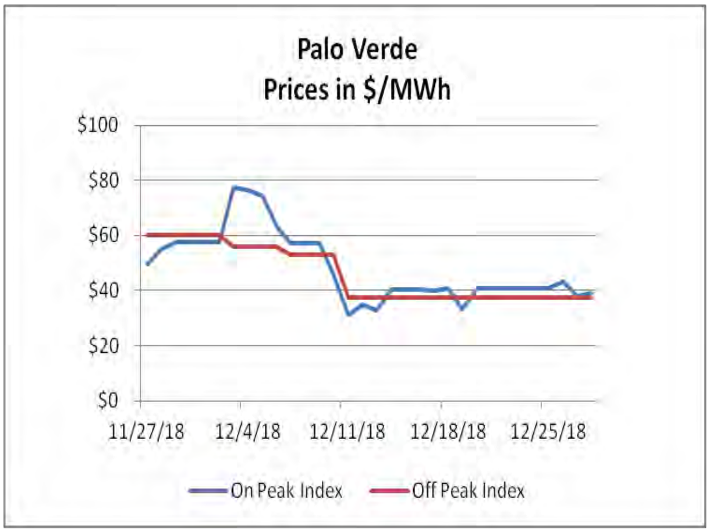
Power-sector coal stockpiles increased by 4.5 million tons during the month, below the 10-year average build of 7.6 million tons. During the prior 10 years, October stockpile fluctuations versus the prior month have ranged from a build of 1.5 million tons to a build of 13.5 million tons.

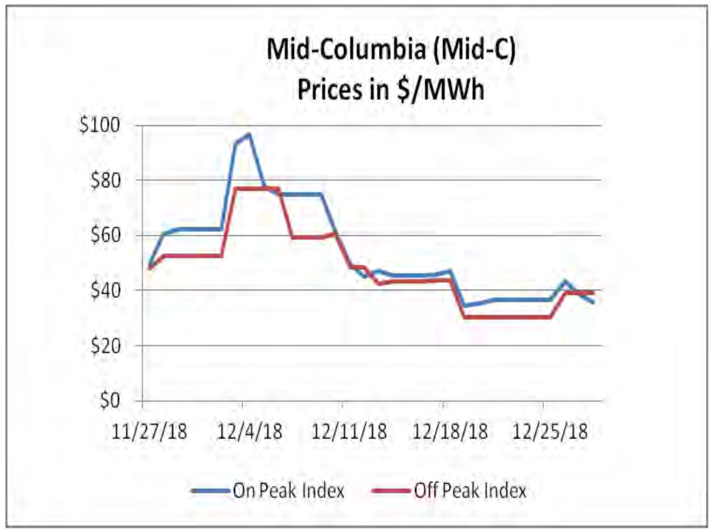
The EIA estimates that the October stockpile level of 105.2 million tons translates to 82 days of burn and 80 days of burn, respectively, for bituminous and sub-bituminous coal, 3.1% below and 11.4% above the five-year averages for the month.

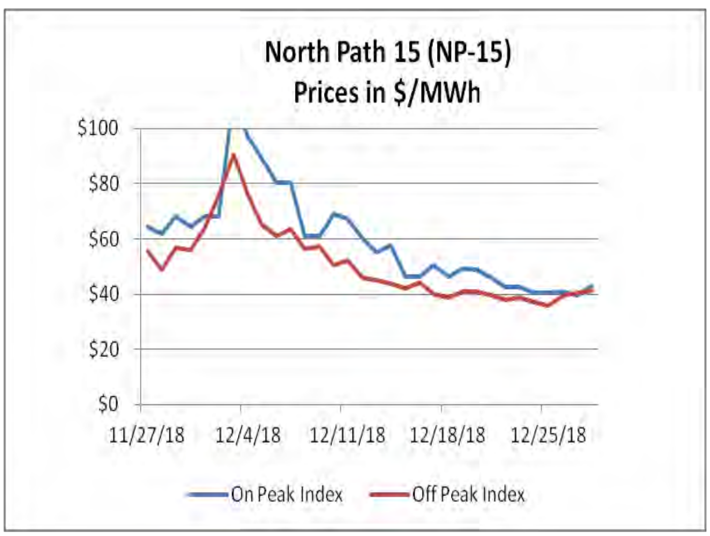
Western Electricity Market Prices

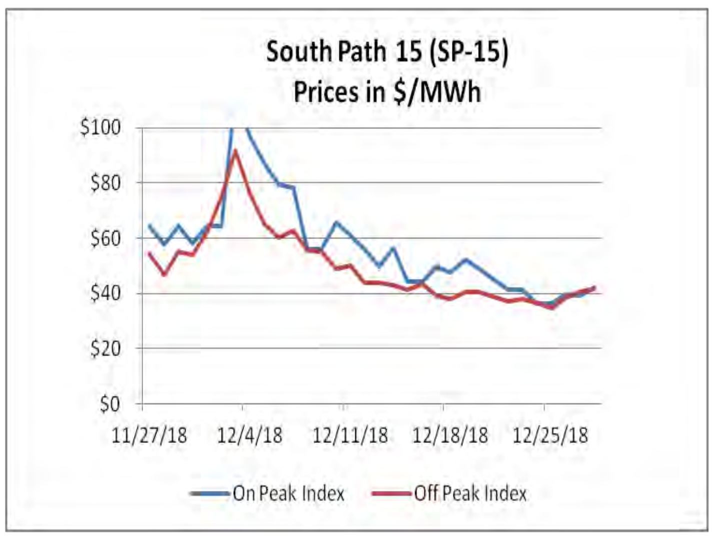












* COB off-peak prices unavailable

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 12/20/2018 03:44:01 PM

To: Aldis.Raisters@gapac.com; kwilson@legadv.com; Martha_C@columbiasteel.com; mruckwardt@schn.com; Samuel.Liebelt@kapstonepaper.com; todd.wiseman@solvay.com; tom@richlandpaper.com; Wes.Hill@gapac.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; mary mccordic@shell.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; kmoyer@energystrat.com; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Amy Beck <amy.beck2@boeing.com>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Brad Beavers <bbeavers@timberproducts.com>; Bradley Mullins <brmullins@mwanalytics.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Charley Hathaway <charley.hathaway@nwpsllc.com>; Charley <[redacted]>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Courtney Smith <courtney.smith@shell.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Dan Coyne <dancoyne@coynenet.com>; David Barge <David.A.Barge@tsocorp.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Tobin <DavidTobin@boisepaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Fawn Barrie <fbarrie@legadv.com>; Graham Bailey <graham.bailey@nippondynawave.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft.com>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Carr <jcarr@icnu.org>; John Carr <johndcarr1@msn.com>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.org>; Mark Nelson <pacounsel@pacounsel.rog>; Mark Steele <steele@norpac.com>; Mark Steele <Mark.Steele@norpac.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@rocktenn.com>; Michael Kuhn <mike.kuhn@westrock.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Kaiser, Nick <Nick.Kaiser@nippondynawave.com>; Public Affairs Counsel <pac@pacounsel.org>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <PLydon@lhs.org>; Pat Ortiz <Patrick.Ortiz@kapstonepaper.com>; Paul Langley; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Sandi Swarthout <sswarthout@capconn.net>; Scott Hawley <Scott.R.Hawley@tsocorp.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steven Castracane <steven.castracane@linde.com>; Steve Wood <S.Wood@resolutefp.com>; Tim Boyd <[redacted]; Tom Yarborough <Tom.yarborough@weyerhaeuser.com>; Tony Hardenbrook; Tyler Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Chuck Gates [redacted] Nancy Holbrook <Nancy.Holbrook@bp.com>; Nancy Hollbrook <Nancy.Richardson@bp.com>; Robert Pierce <robert.pierce@shell.com>; Rusty Williams <williwk@bp.com>; Bill Gilmore <billmg@penwool.com>; Chad Stokes <cstokes@cablehuston.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Ed Coghlan <Ed.coghlan@onsemi.com>; Jake Evans <Jake.evans@onsemi.com>; Jared Sommer <sommerj@byui.edu>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kyle Williams <williamsk@byui.edu>; Nick Avenetti <nick@perlite.com>; Rick Stricker <rstricker@baf.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Sam Merrick <merricks@byui.edu>; Sharon Andersen <Sharon.w.anderson@intel.com>; Steve O'Brien <sobrien@baf.com>; Tommy Brooks <tbrooks@cablehuston.com>; Jeff Fishman <jfishman@energystrat.com>; Jeff Burks <jburks@energystrat.com>

Subject: AWEC Energy Brief

Our staff wish you and your families a wonderful Christmas!

This energy brief is provided by Energy Strategies

on behalf of the Alliance of Western Energy Consumers.

http://www.awec.solutions

Will 2019 be the year Oregon gets climate change bill to finish line? Ted Sickinger -The Oregonian/OregonLive

If Oregon lawmakers are going to pass legislation to address climate change, 2019 could very well be their year.

Such legislation has been floating around the capitol in one form or another for a decade. But it remains deeply controversial because of its complexity, its potential cost to consumers and businesses, and ongoing questions over what works.

Contrary to past efforts, however, most of the forces in Salem are now pulling in the same direction. Consider:

- Gov. Kate Brown, Senate President Peter Courtney and House Speaker Tina Kotek are all committed to passing a climate bill. The Legislature created a Carbon Policy Office early this year and Brown has made climate change policy a centerpiece of her post-election agenda. Courtney and Kotek, meanwhile, took the unprecedented step of co-leading the Joint Interim Committee on Carbon Reduction.
- While the legislation doesn't require a supermajority vote, Democrats' expanded majorities in both chambers could help proponents find enough votes to pass it. Several newly elected Democrats actively campaigned on climate change and endorsed the bill.
- A statewide business group, Oregon Business for Climate, was formed late last year to back the legislation, and now counts 100 members, including prominent companies such as Nike and Adidas. Meanwhile the traditional business lobby, which has opposed past versions of the legislation, is in disarray and going into the 2019 session flat footed.
- Lawmakers have signaled their willingness to meet one of Portland General Electric and PacifiCorp's key demands on the bill, a move designed to win their support for the legislation and remove a powerful barrier.
- Successive reports are painting an increasingly dire picture of the effects and pace of climate change, backing the case for immediate action. The most recent came in this week's biennial report to the Legislature by the state Global Warming Commission. It suggests that Oregon's emissions are on the rise again, and that the state is unlikely to meet its emission-reduction goals. Meanwhile, the effects of climate change are already being felt regionally and will intensify.

None of this is to say that passage of the Clean Energy Jobs bill is a lock. It is still a highly complex piece of legislation, one that is effectively a new tax on businesses and consumers and

could easily get entangled in the end-of-session logjam with other revenue measures.

While backers claim their polling shows strong support of climate legislation, voters in Washington have twice rejected a carbon tax, most recently last month. Though the policy differs from the cap-and-trade system Oregon is considering, the outcome reflects deep-seated opposition in some corners of the business community and the voting public.

For Brown, the climate change legislation could define both her legacy and her future. She admits as much: "This is absolutely a legacy issue," she said. "Future generations will judge us not on the fact of global climate change, but what we've done to tackle it."

For a governor who is staunchly pro-environment but regularly criticized for her failure to lead on big issues, enacting the nation's second economy-wide cap on greenhouse gas emissions would be signature legislation – no matter what happens on the perennial question of taxes and education funding.

"People have been waiting for her to use her political capital to publicly lead the charge on a big issue, not just negotiate behind the scenes," said Jim Moore, a political scientist at Pacific University. "This is something you can nail to the wall and say, 'I did this, and the world is a better place for it.'"

Dave Robertson, PGE's vice president of public policy, says it's hard to overstate the importance of the governor's role. Her championing the work of the Carbon Policy Office, and coordinating with lawmakers to head off any problems is a prime example, he said.

"This is such a complicated and time-intensive legislative lift," he said. "If you don't have someone like the governor making it a priority, without that bully pulpit push, it's easy to say, 'That's too complicated. Let's do it later.'"

For her part, Brown says her role "is to set the broader principles and, behind the scenes, to do the arm-twisting, the carrot, and the kick in the rear to get this done."

Hydro One, Avista file petition with Wash. regulator to reconsider merger, Sania Khan - SNL

Hydro One Ltd. and Avista Corp. filed a petition with the Washington Utilities and Transportation

Commission to reconsider its Dec. 5 order rejecting their proposed $5.3 billion merger.

In a Dec. 17 filing, the Canadian utility and Spokane, Wash.-headquartered company said the commission erred in issuing its order and "misapprehended" the political influence that Ontario's ownership in Hydro One may reflect on Avista's operations. They said the commission "failed to identify with any specificity how Provincial actions could actually impact Avista."

The companies requested the state regulator review the 82 revised stipulated commitments they say will ensure Avista's independence. The companies further said the commission's order downplayed the merger's benefits to customers and erred in concluding the possible provincial interference with Avista upon perceived harm to Hydro One shareholders.

The state utilities and transportation commission denied the proposed acquisition for not protecting Avista from the influence of the Ontario government, which owns 47% of Hydro One's shares. Being the biggest shareholder in the Toronto-headquartered transmission and distribution utility, the provincial government controls its board and limits ownership of its shares by other groups and individuals. The commission also cited the replacement of Hydro One's board of directors and CEO by Ontario Premier Doug Ford as the kind of political intervention it feared the merger would encourage.

The commission has 20 days to act on the request for reconsideration. If the commission allows a rehearing of the case, the companies requested expedited proceedings so the case could conclude by the end of January 2019 in an effort to close the transaction before the March 29 merger deadline and the expiration of the Hydro One's funding for the transaction. (Washington UTC docket U-170970)

The merger previously received needed approvals from the Federal Energy Regulatory Commission, the U.S. Committee on Foreign Investment, the Federal Communications Commission, the Federal Trade Commission and regulators in Alaska and Montana. Decisions are still pending in Idaho and Oregon.

In Oregon, an administrative law judge said in a Dec. 13 memo that the Oregon Public Utility Commission would not issue its decision by the Dec. 14 date requested by the companies as it reviews the WUTC's decision "to determine its procedural impact on the proceedings in Oregon." There is no statutory deadline in Oregon, and the commission has not provided guidance regarding when it will render a decision, but the case has been fully submitted.

Idaho, similarly, does not have a statutory deadline for a decision. The case has been fully submitted,

and the Idaho Public Utilities Commission has begun deliberations, taking into consideration the WUTC's decision and recent developments in the Idaho proceeding. A revised settlement was filed with the commission Nov. 27 that included additional ring-fencing provisions to protect the autonomy of Avista's management team post-merger.

Energy transition advocates push financial tools for smooth exit from coal, Taylor Kuykendall - SNL

While U.S. mining companies push for policies to support the coal-fired power generation units that make up much of their customer base, power generators and the bodies that regulate them are increasingly being directed to tools that will allow them exit from coal in the most painless ways possible.

In November, the Sierra Club published a white paper that laid out a road map using green tariffs, securitization, capital recycling and similar pathways toward accelerating coal plant retirements while building out renewable energy resources in a way that is minimally disruptive to investors and consumers. Earlier this month, Energy Innovation, an organization with a mission to "accelerate progress in clean energy," released four policy briefs aimed at helping regulators, utilities and investors work together to make sure customers benefit from a transition away from coal power generation.

"What we wanted to do with this set of reports is to create a pathway for utilities to look at the transition and get ahead of it on their own terms, and get uneconomic coal off the books profitably, and reinvest in clean energy in a way that helps their shareholders and their bottom lines, but also helps the communities where coal closures would affect economies and the workforce," said Silvio Marcacci, communications director for the organization.

The briefs focus on showing how policymakers and other stakeholders can identify where running uneconomic generation costs more than building new wind or solar; the benefits of swapping "steel for fuel" when it comes to costs of renewables versus fossil fuels; processes for utilizing depreciation accounting in early coal retirements; and the process for refinancing un-depreciated balances on coal plants in service to lessen the burden on consumers, primarily by replacing some portion of equity with corporate debt.

Together, the policy papers outline the steps for a holistic plan for assessing the cost of existing coal units, managing depreciation of those assets,

refinancing regulatory assets and then reinvesting proceeds.

Utilities have already begun a rather speedy transition away from coal. While some observers expect that to slow down, the pressure is mounting on power generators to move away from the fuel by retiring existing assets and building out other forms of generation. A recent PacifiCorp Inc. report to regulators concluded that most of its coal units cost more to run than to close and replace. Xcel Energy Inc. has already announced it would hit an 80% carbon emissions reduction target by 2030 and achieve zero emissions by 2050. DTE Energy Co. has vowed to retire all of its coal plants by 2040.

"There's a financial transition that has to happen," said Ron Lehr, a former commissioner and chairman of the Colorado Public Utilities Commission who also was an author on the four Energy Innovation reports. "We want to avoid Chapter 11 [bankruptcy reorganizations]. ... We want to see this transition from uneconomic to more economic resources to happen in a thoughtful and more beneficial way, if we can, instead of having the creditors take over and drive the process."

At times, that means diving into some of the more esoteric topics around regulating U.S. power generation. For example, Lehr says decisions about the depreciation of assets may not attract a lot of headlines but are key to determining when a coal plant might retire and when that is going to happen in regulated markets. The figure, which marks the useful life of an asset such as a coal generating unit, is more elastic than many may think and might move by years or even decades, he said.

"Since transition can lead to substantial fuel, operations, and maintenance savings, and refinancing and reinvesting capital can provide significant interest rate savings, reinvestment in other elements of transition that increase the velocity of capital recycling to meet customer goals is possible," the group wrote in the policy brief focused on depreciation. "A variety of outcomes deserve further consideration: energy efficiency, demand management, distributed resources, and additional grid-scale clean energy investments."

While some coal plants are still operating profitably across the U.S., there are plenty that are either uneconomic already or getting close as the price of renewable energy trends downward and natural gas continues to pressure them as well, Lehr said.

"There are some of them that just stick out as wildly out of the money," he added. "You scratch your head and wonder why this isn't happening already for some of the plants."

Some of the measures recommended could

require changes to state policy, so acting sooner rather than later could ease the transition for a utility looking to retire coal and for its consumers, said Mike O'Boyle, director of electricity policy for Energy Innovation. O'Boyle cited recent research from the Carbon Tracker Initiative, a group doing similar work to promote the idea coal is becoming increasingly uneconomic, which recently found more than two-fifths of the world's coal-fired power plants are already unprofitable and more than 96% of coal units in the world could be unprofitable by 2030.

"The process of determining when a coal plant needs to retire takes years," O'Boyle said. "So looking out to 2030 and seeing that kind of number should scare anyone who owns a coal plant into considering a lot of these tools."

Washington Governor's Clean Energy Plan Would Kill Fossil-Fueled Power by 2045, Rick Adair – Clearing Up

Washington Gov. Jay Inslee on Dec. 10 rolled out a clean energy proposal for the coming legislative session that includes phasing out coal-fired electricity generation by 2025-even if imported from out of state-and eliminating all fossil-fueled generation by 2045.

Flanked by environmentalists and Democratic state legislators, Inslee said during a press conference that a package of targeted spending and legislation would reduce the state' s greenhouse gas emissions 25 percent below 1990 levels by 2035, eliminating nearly 16 million metric tons of carbon emissions and meeting a target in state law.

In all, the proposal would spend $268 million in the 2019-2021 state budget.

In addition to the 100-percent clean energy goal, the proposal addresses four other policy aims-constructing energy-efficient buildings, eliminating hydrofluorocarbons, transitioning to electric transportation, and adding a clean fuel standard for vehicle emissions.

These five initiatives would eliminate 15.8 MMT of CO2-equivalent GHG, Inslee said.

Acknowledging that past efforts to impose a price on carbon failed to gain traction in the state Legislature and with voters-two big legislative pushes and two initiatives have failed-he never the less said he wouldn't rule out another carbon tax or fee in the future. But he said his current plan would still be a giant step.

"It's like asking Neil Armstrong 'Why did you only go to the moon?"' he quipped. "We're going to the moon this year with this package. That's the rea son this package was developed this way, so that it can

pass this year."

His confidence stemmed from the bolstered majorities Democrats will hold in the state Legislature due to the midterm elections, with a margin of seven in the Senate and 16 in the House, including some who Inslee described as "climate warriors."

The Legislature will convene on Jan. 14 for a 105-day session.

Society must deal with climate change today, Inslee said, because failing to do so is not an option.

"There is no other option than victory," Inslee said, invoking Winston Churchill, "because without victory, there is not survival. If that sounds apocalyptic, then look at the science."

Inslee was referring to recent research that likened current climate warming of the oceans to warming 252 million years ago due to volcanic greenhouse gases that caused hypoxia and was estimated to have killed nearly 90 percent of the planet's species, an event geologists refer to as the "Great Dying."

Inslee also wants to add $25.5 million to the current $110 million allocation in the state's incentive program for community and shared solar projects. The additional allocation would fund prospective applicants for the popular program, which is expected to fully commit the $110 million by February, and not by the planned 2021 application deadline.

The governor's budget proposal would allocate about $11.1 million of $25.5 million for the 2019-2021 biennium, according to Tara Lee, Inslee's deputy director of communications.

To fund the clean-energy package, as well as his $1. 1 billion orca initiative and the state operating, capital and transportation budgets, Inslee is proposing a mix of tax and revenue changes he says will generate an additional $4 billion over the next two fiscal years, a plan he laid out on Dec. 13.

These changes include increases in the state business and occupation tax ($2.6 billion); a new capital-gains tax on asset sales by the state's wealthiest taxpayers ($975 million); and tilting the current flat real estate excise tax applied on sales so that sales of lower-valued properties would pay less and sales of higher-valued ones would pay more ($400 million).

Inslee's package and budget proposals were not greeted kindly by state Republicans.

State Sen. John Braun (R-Centralia), the ranking Republican on the Senate budget committee, said the governor wanted "to go on an extreme spending spree," and that his plan is "not a serious

proposal." Also slamming the proposals was state Rep. Bruce Chandler (R-Granger), the ranking Republican on the House budget committee.

"If you're an orca …or someone who voted for the failed carbon tax in November, you probably like this budget," Chandler said in a statement. "If you're a small business owner . . . or the average citizen trying to make ends meet, you probably don't."

In addition, Rep. Richard DeBolt (R-Chehalis), ranking Republican on the House Capital Budget Committee, intends to offer an alternative to Inslee's plan that will "utilize incentives-instead of penalties-for utilities and industry partners to transition to clean energy. "

"Like our governor, House Republicans care deeply about the environment and reducing carbon emissions," he said. "And we agree that our state can-and must-do more for a clean-energy future."

DeBolt said his plan would require all new energy resources and production to be 100 percent clean; encourage investments in carbon reduction, including electric vehicle charging stations and forest health management; and would keep energy bills low as the state transitions to a clean-energy future.

The state's investor-owned utilities, which all own coal and natural gas plants for generating electricity for Washington customers, said they were already moving toward increasing their clean energy portfolios, and acknowledged a need to reduce carbon emissions.

All co-own portions of the Colstrip coal plant in Montana, and are already working through issues related to that with the Washington UTC, including the planned shuttering of units 1 and 2 in 2022 and the accelerated depreciation of units 3 and 4.

Puget Sound Energy also owns more than 1,900 MW of gas-fired baseload and peaking generation, and has identified an additional need for 1,912 MW of peaking capacity through 2037.

PSE "agrees there is an urgency to act and reduce Washington state's greenhouse gas emissions," spokes man Andrew Padula said. "We are encouraging our customers to do the same by offering programs in energy efficiency, renewable energy and clean transportation."

Padula said PSE also needs to ensure actions taken to reduce carbon emissions are affordable and provide reliable services for its customers, and said Puget "continues to work with policymakers to evaluate the costs and best approach to achieving these goals."

PacifiCorp said it is currently transitioning to cleaner energy resources, and that it supports policies that reduce emissions and increase the

use of renewable energy.

"As the governor's proposal takes shape, we will continue to urge policymakers to favor policies that add to the progress we have made without imposing significant new costs on customers and communities in Washington or that push new costs and carbon emissions into other states," spokesman Bob Gravely said.

Gravely said the company had expressed its views on carbon policy generally to Inslee's office and other policymakers, but hadn't specifically done so on Inslee's current proposal.

He also noted that PacifiCorp has been transitioning to a more diverse and cleaner energy portfolio for more than a decade and that it expected that to continue.

PacifiCorp has service areas in six states. Natural gas units allocated to Washington customers and its shares are Hermiston (237 MW) and Chehalis (518 MW). In addition to Colstrip, the utility's Jim Bridger coal units are also assigned to the state.

Avista said it was consulted on Inslee's proposed carbon policy, but "we do not yet know how our feedback was incorporated," Mary Tyrie, Avista communications manager, said.

Tyrie said the company recognizes that "utilities should continue to increase adoption of renewables in a way that preserves system reliability and keeps energy affordable," adding, "there will continue to be a need for thermal generation in the years leading up to 2045, at a minimum as a transition to 100 percent clean energy."

Avista's most recent 20-year Integrated Resource Plan identified an additional need of around 390 MW of thermal upgrades and peaking capacity through 2034, on top of the more than 350 MW of natural gas- and biomass-fired generation it owns.

"To the extent that we install thermal upgrades and peaking capacity, we will seek treatment of the investments in a way that mitigates the stranded asset risk," Tyrie said.

She also noted that resource planning must take into account not only Washington's electricity needs, but those of its Idaho customers as well, which could include resources not allowed in its Washington mix.

"Our IRP will continue to include a level of thermal resources, reflecting both the transition period between now and 2045 and the fact that we serve customers in Idaho in addition to Washington," she said.

Seattle City Light's New CEO Eager to Tackle Challenges Ahead, Dan Catchpole – Clearing

Up

Debra Smith long ago lost count of how many people she has met with since taking over Seattle City Light's top post in October. She set out to spend the first few months talking with as many people inside the utility and beyond before making any major changes.

"I've been talking to customers, employees, community members, business customers, other city departments, pretty much anyone who wants to talk with me," Smith told Clearing Up. "I want to spend the first three months learning" about City Light, before making any major changes.

"I'm finding it difficult at times" to hold back from jumping into issues right out of the gate, she said.

One priority for Smith is already clear: Seattle City Light's workplace culture. She said she wants to send a "strong signal about changing the culture" at the utility, which has been dogged by claims of sexism and other workplace problems in recent years. Sexual harassment allegations, as well as problems with billing and customer relations, prompted the departure of Larry Weis, Smith's predecessor, in late 2017.

An independent investigator failed to find widespread sexism, though, according to a report commissioned by City Light and released in November. Nonetheless, Smith said, there is work to be done.

"There are workplace culture issues here in terms of how people treat each other and [creating a] respectful workplace that are serious," she said. "Even when some thing doesn't meet the legal definition for harassment, you can have conditions that don't feel comfortable and safe to everybody, and they can't do their best work."

Workplace culture in America is changing. Since the #MeToo movement emerged, women and other marginalized workers have "become more assertive in calling for a better workplace," she said.

The problems are not new, but now, people are breaking their silence. "There are a lot of conversations that didn't happen for a long time that are happening now," Smith said.

"I don't know that City Light is worse than other places, but I know there's work to do," regardless, she said.

Smith wants to push Seattle City Light's culture in other directions, as well. "We have to learn to be nimble," embrace change and "challenge our own assumptions around work," she said.

Change, as always, can be hard. "There are a lot of people in the industry who are afraid, because a lot

is changing, and they don't know how it is going to affect them," Smith said.

Like other utilities, Seattle City Light faces fundamental challenges and changes in coming years. "Most of the problems we have here are the same everywhere," she said. "There's never enough money."

In July, the Seattle City Council approved a new strategic plan for the utility that includes significant belt tightening (CU No. 1859 [10]). As with much of the region, SCL's loads have been flat or declined despite Seattle's growing economy and population.

"It doesn't matter how awesome we are, if our revenue continues to drop, we aren't going to survive," Smith said. "We have to be an organization that supports our customers' choices in how they get their energy."

Leaning into the changes sweeping the industry is the only acceptable path forward from Smith's perspective. But that path's route is not clear, as she told the City Council in written answers submitted during her interview process.

"The business model is evolving, and we are all figuring it out together," she told councilmembers. "Collaboration with customers, suppliers, and even potential competitors is critical. Ten years from now, we may truly be service providers who install and maintain solar panels on our customers' roofs and receive a monthly revenue stream to provide back-up service when the sun doesn't shine."

Her background in finance and customer relations at Central Lincoln PUD and before that, Eugene Water and Electric Board have given her critical experience to draw on in her new role, she said in her interview with Clearing Up.

Seattle City Light must become intensely customer focused, she said. "I want to get rid of the R-word: ratepayers. These are our customer owners," and they increasingly have choices about how they get and use energy.

The utility must help customers more on their side of the meter, such as supporting solar installations, electric vehicle charging or developing microgrids, she said.

Advanced meters are critical to making that happen. The utility expects to install the last of roughly 440,000 advanced meters by the end of the year.

Technology is something of a double-edged sword for the electric utility industry these days. "Technology is both driving the need for the change," and enabling utilities to take those changes in stride, she said. "It's a weird place."

Historically, the industry has not been the most progressive in adopting new technologies, but

Smith sees it as vital to navigating the challenges ahead. For example, she said, advanced meters can help City Light evaluate and adapt its business model to new market conditions.

It is not clear what Seattle City Light's future business model will look like, she said. That will depend m no small part on policy decisions made by the city's elected leaders. As head of a major city department, she 1s a member of the mayor's cabinet. Unlike most utilities, City Light is an integral part of city policymaking.

"The issues I'm learning most about are the Seattle issues," Smith said.

She already had a handle on most of the regional issues from her time in Oregon. That knowledge will be useful in her new role.

"When I was in the recruitment process, one of things the mayor and the council both talked about was their desire for Seattle to be more involved regionally" in the energy sector, she said.

One issue on her radar is BPA rates. Like many publicly owned utility executives, she is well aware of the widening gulf between Bonneville rates and market rates, as well as the approaching expiration of the agency's contracts with the region's utilities in 2028.

"I have a really good relationship with Bonneville.

I'm not letting that go," she said.

But as head of City Light, she added, "I am very vested in making sure BPA is who I want to choose in 2028. I think city leaders will back me on that."

Bonneville Closes Agreement to Use CAISO as Reliability Coordinator, Rick Adair – Clearing Up

BPA formally signed an agreement on Dec. 10 to begin receiving federally mandated reliability coordinator services from California ISO on Nov. 1, 2019.

Reliability coordinators have the highest level of authority and responsibility for the reliable operation of the power grid.

BPA is currently implementing new processes and technologies to conform to the data and reporting requirements associated with CAISO's RC services, Bonneville spokesman Kevin Wingert told Clearing Up.

"Much of this work is applicable to participation in an energy imbalance market," he added. "As a result, BPA may recognize less internal start-up costs for the Western EIM if it chooses to join."

FERC approved CAISO's proposed RC tariffs on Nov. 14.

According to its implementation plan CAISO expects to commence RC services for its own balancing authority area on July 1, in advance of onboarding other takers four months later.

As of late October, Bonneville was one of 25 entities in the Western Interconnection opting to use CAISO, while another nine will use the Southwest Power Pool, according to CAISO information. All Northwest entities save one, Gridforce Energy, have committed to using CAISO.

Bonneville began re-evaluating its choice of RC after other groups explored providing the services in the West and several entities declared their intents to leave Peak Reliability, which until then held a monopoly in 14 Western states, British Columbia and a small portion of Mexico.

CAISO precipitated matters when it announced in January 2018 that it would stop using Peak, effective September 2019, and would instead become the RC for its BAA and offer RC services to other balancing authorities and transmission operators in the Western Interconnection.

By June, when SPP proposed offering RC services in the West, all others but CAISO had withdrawn from the field. To evaluate its options if it also chose to leave Peak, BPA signed non-binding letters of intent with CAISO and non-disclosure agreements with CAISO and SPP.

But after Peak announced July 18 that it would cease operations at the end of 2019 and wind down operation during 2019-2020, that left Bonneville with only two options-to join SPP or to join CAISO.

Bonneville announced Aug. 3 that it was "strongly leaning toward" choosing CAISO as its RC, and made the selection official

two weeks later after a "thorough analysis and consideration of alternatives" that judged the grid operator to be the strongest candidate.

Sizzling Summer Temperatures Drove Up Electricity Sales in 2017, Dan Catchpole – Clearing Up

A hot summer, cold winter and growing state economies in 2017 pushed electric sales to the highest levels in more than a decade, according to a presentation on the state of the electric utility sector at the Northwest Power and Conservation Council's Dec. 11 meeting.

The presentation, by Massoud Jourabchi, the Council's economic analysis manager, also noted that regional sales, load and revenues saw year-over-year increases, and the summer peak in 2017 continued to grow faster than winter peak and

overall energy demand. Solar installations behind meters continued to increase.

In addition, Jourabchi said, while the number of customers with advanced meters is growing, time-of-use rates are not.

Overall, the regional electric utility sector is "steady as she goes," he said during an interview with Clearing Up.

The report also noted that power sales in 2017 increased by 740 aMW over 2016, and retail sales revenues grew by more than $800 million, from $13.05 billion to $13.85 billion.

Also, regional load grew in 2017 by 858 aMW compared to the previous year.

The residential sector saw the biggest increase, at 620 aMW, followed by an increase of 165 aMW by the commercial sector. The industrial sector increase amounted to 14 aMW.

The sales increases were offset somewhat by a decline in irrigation sales, which dropped by 61 aMW.

Weather largely drove the upticks in sales and load.

The winter months were colder and the summer was hotter than usual.

Brutally cold weather buffeted the region in early 2017, which ranked among the region's five-coldest winters on record. The average regional temperature dropped to 19.6 degrees on Jan. 6, 2017. Demand surged across the region. Idaho Power tied its winter peak of 2,527 MW that day.

The frigid winter was followed by the second hottest summer on record in the region. Several utilities posted new summer peaks. Idaho Power had a new record summer peak of 3,422 MW on July 7. Among the record-breakers in August were BPA and Portland General Electric. Bonneville set a new summer peak in its balancing area of 8,226 MW on Aug. 2, 2017.

That same day, PGE set a new summer peak of3,588 MW.

While overall loads have been relatively flat or slightly down in the last decade, the region's summer peaks continue to grow, Jourabchi noted.

Solar installations saw significant expansion in 2017. Across the region, the number of installations jumped from 28,202 in 2016 to 36,674 last year.

The first nine months of 2018 have seen more moderate weather, driving demand down by about 3 percent compared to the prior year. Based on preliminary data for January through September 2018, demand was down by 612 aMW.

Advanced meters are also becoming more widespread across the region. Western Montana

has the greatest deployment of advanced meters, where 93 percent of customers have them. That compares to 88 percent in Oregon, 65 percent in Idaho and 61 percent in Washington.

While advanced meters are more widespread, few customers are charged using time-of-use rates. The total number in the region in 2017 actually declined compared to the previous two years. It fell to 19,496 customers in 2017, compared to 22,015 in 2016 and 20,893 in 2015.

"You have the infrastructure now to read data at a finer level," Jourabchi told Clearing Up.

Utilities need to take the next step, time-of-use rates and other dynamic pricing, to encourage customers to use less energy during peak times, he said.

However, only 15 time-of-use rate schedules exist across the region. Jourabchi raised similar concerns with the Council during a presentation in December 2017.

"If you want more responsive customers, they need the information" to reduce strain on the system from peak demand, he said.

The issue likely will only become more acute as time goes on, Jourabchi said.

elly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 12/13/2018 11:27:13 AM

To: Aldis.Raisters@gapac.com; kwilson@legadv.com; Martha_C@columbiasteel.com; mruckwardt@schn.com; Samuel.Liebelt@kapstonepaper.com; todd.wiseman@solvay.com; tom@richlandpaper.com; Wes Hill@gapac.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; mary.mccordic@shell com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Amy Beck <amy.beck2@boeing.com>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Brad Beavers <bbeavers@timberproducts.com>; Bradley Mullins <brmullins@mwanalytics.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Charley Hathaway <charley.hathaway@nwpsllc.com>; Charley <[redacted]>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Dan Coyne <dancoyne@coynenet.com>; David Barge <David.A.Barge@tsocorp.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Tobin <DavidTobin@boisepaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Fawn Barrie <fbarrie@legadv.com>; Graham Bailey <graham.bailey@nippondynawave.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft.com>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Carr <jcarr@icnu.org>; John Carr <johndcarr1@msn.com>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.org>; Mark Nelson <pacounsel@pacounsel.rog>; Mark Steele <steele@norpac.com>; Mark Steele <Mark.Steele@norpac.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Broughton <michael.l.broughton@boeing.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@rocktenn.com>; Michael Kuhn <mike.kuhn@westrock.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Kaiser, Nick <Nick.Kaiser@nippondynawave.com>; Public Affairs Counsel <pac@pacounsel.org>; Pat Ealy <pat.ealy@akzonobel.com>; Pat Lydon <PLydon@lhs.org>; Pat Ortiz <Patrick.Ortiz@kapstonepaper.com>; Paul Langley; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Sandi Swarthout <sswarthout@capconn.net>; Scott Hawley <Scott.R.Hawley@tsocorp.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steven Castracane <steven.castracane@linde.com>; Steve Wood <S.Wood@resolutefp.com>; Tim Boyd <[redacted]; Tom Yarborough <Tom.yarborough@weyerhaeuser.com>; Tony Hardenbrook; Tyler Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Bill Gilmore <billmg@penwool.com>; Chad Stokes <cstokes@cablehuston.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Ed Coghlan <Ed.coghlan@onsemi.com>; Jake Evans <Jake.evans@onsemi.com>; Jared Sommer <sommerj@byui.edu>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kyle Williams <williamsk@byui.edu>; Nick Avenetti <nick@perlite.com>; Rick Stricker <rstricker@baf.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Sam Merrick <merricks@byui.edu>; Sharon Andersen <Sharon.w.anderson@intel.com>; Steve O'Brien <sobrien@baf.com>; Tommy Brooks <tbrooks@cablehuston.com>; Chuck Gates [redacted]; Nancy Holbrook <Nancy.Holbrook@bp.com>; Nancy Hollbrook <Nancy.Richardson@bp.com>; Robert Pierce <robert.pierce@shell.com>; Rusty Williams <williwk@bp.com>

Cc: Ed Finklea <efinklea@awec.solutions>; Scott Gutting <sgutting@energystrat.com>

Subject: Natural Gas Service Update AWEC Memo

Attachments: AWEC Update on Natural Gas Service December 13, 2018.docx

---

AWEC Members,

Please see the attached Natural Gas Service Update from our Natural Gas Director, Ed Finklea. Please let him know if you have questions.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

AWEC

Alliance of Western Energy Consumers ◆ 818 SW 3rd Avenue, #266 ◆ Portland, OR 97204 ◆ 971-544-7169 ◆ AWEC.solutions

Memorandum:

To: Alliance of Western Energy Consumer Members

From: Ed Finklea

Re: Natural Gas Service on Northwest Pipeline – Update

Date: December 13, 2018

I spoke this week with Eran Klien of Enbridge regarding the progress of work being done to restore full service to Sumas by West Coast. Tool runs are being performed today and tomorrow. The integrity work that was done over last weekend is complete. One additional tool run will be performed December 20, 2018. After that work is done, Enbridge will announce its plans for January integrity work. Some additional work will be necessary in January, but the extent and the timing will not be announced by Enbridge until around December 20th. Enbridge is aware of its timing in relation to bid week for January, which I believe starts December 21.

Deliveries to Sumas have been in the 1.4 Gigajoules per day this week. As you have seen, prices have moderated somewhat, with day prices in the $5.00 to $6.00 range. Northwest Pipeline has lifted entitlements. The current condition should enable consumers and their marketers work down balances and avoid penalties. Cold weather, reduced flows at Sumas, or declining storage balances at Jackson Prairie are the factors that could push Northwest Pipeline back into needing entitlements to balance the system. Northwest Pipeline would of course post on its EBB any change in its status.

Consumers should still plan on getting less than full deliveries at Sumas for the balance of the winter. However, if integrity work goes well and no major repairs need to be performed that would take out service, deliveries in the 1.4 to 1.6 Gigajoule level is a realistic expectation at this time for Sumas for the time frame December 20 through the balance of the winter, except when work is being done that requires short term decreases in operating pressures. It is difficult to be more definitive at this time. AWEC will continue communicating directly with Enbridge and Northwest Pipeline and report back to members.

Ed Finklea
AWEC Natural Gas Director

From:	Kelly Francone <kfrancone@energystrat.com>
Sent time:	12/28/2018 10:01:24 AM
To:	Tony Hardenbrook
Cc:	Kim Ignjatovic <kignjatovic@energystrat.com>
Subject:	U of O AWEC Assessments

Hi Tony

We are preparing the first quarter assessments for 2019 AWEC membership. Can you provide the contact information for our accountant, Kim, so that she can send the invoice to the correct party? Thank you.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 01/03/2019 03:36:31 PM

To: Aldis.Raisters@gapac.com; kwilson@legadv.com; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; mruckwardt@schn.com; todd.wiseman@solvay.com; tom@richlandpaper.com; Wes.Hill@gapac.com; mary.mccordic@shell.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Amy Beck <amy.beck2@boeing.com>; Ben Byman <Ben.Byman@lvpnp.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Brad Beavers <bbeavers@timberproducts com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@nippondynawave.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Charley Hathaway <charley.hathaway@nwpsllc.com>; Charley <[redacted]>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Courtney Smith <courtney.smith@shell.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Dan Coyne <dancoyne@coynenet.com>; David Barge <DABarge@marathonpetroleum com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Tobin <DavidTobin@boisepaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j hendrickson@boeing.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Fawn Barrie <fbarrie@legadv.com>; Graham Bailey <graham.bailey@nippondynawave.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Ken Dey <ken dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.rog>; Mark Steele <Mark.Steele@norpac.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky [redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <mike.kuhn@westrock.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Kaiser, Nick <Nick.Kaiser@nippondynawave.com>; Pat Ealy <pat.ealy@akzonobel.com>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Pat Lydon <PLydon@lhs.org>; Pat Ortiz <pat.ortiz@westrock.com>; Paul Langley; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Samuel Liebelt <samuel.liebelt@westrock.com>; Sandi Swarthout <sswarthout@capconn.net>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <SRHawley@marathonpetroleum.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steven Castracane <steven.castracane@linde.com>; Steve Wood <S.Wood@resolutefp.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Yarborough <Tom.yarborough@weyerhaeuser.com>; Tony Hardenbrook; Tyler Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Bill Gilmore <billmg@penwool.com>; Chad Stokes <cstokes@cablehuston.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Jake Evans <Jake.evans@onsemi.com>; Jared Sommer <sommerj@byui.edu>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kyle Williams <williamsk@byui.edu>; Nick Avenetti <nick@perlite.com>; Phil Foss <phil.foss@onsemi.com>; Rick Stricker <rstricker@baf.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Sam Merrick <merricks@byui.edu>; Sharon Andersen <Sharon.w.anderson@intel.com>; Steve O'Brien <sobrien@baf.com>; Tommy Brooks <tbrooks@cablehuston.com>; Chuck Gates[redacted] Nancy Holbrook <Nancy.Holbrook@bp.com>; Nancy Hollbrook <Nancy.Richardson@bp.com>; Robert Pierce <robert.pierce@shell.com>; Rusty Williams <williwk@bp.com>

Subject: AWEC Energy Brief

AWEC

This energy brief is provided by Energy Strategies
on behalf of the Alliance of Western Energy Consumers.
http://www.awec.solutions

NW Natural seeks 12.6% increase in base rates for Wash. gas customers, Sibyl Layag -SNL

Northwest Natural Holding Co. gas utility Northwest Natural Gas Co. asked Washington regulators to increase base rates by 12.6% so it can recover higher operating costs and distribution system investments made over 10 years.

The request, filed Dec. 31, 2018, with the Washington Utilities and Transportation Commission, also includes benefits from the 2017 federal tax cuts that would be given back to customers, resulting in a 2.4% decrease in customer rates for the first two years, according to a Jan. 2 news release.

Falling natural gas prices have caused an almost 40% dip in average residential rates in Washington, which has also become the fastest growing portion of NW Natural's service territory, making the request a "necessary step" in the regulatory process to recover costs, NW Natural President and CEO David Anderson said. The utility has invested $58.7 million in infrastructure improvements and growth projects. Washington customers also saw a 7.2% bill reduction Nov. 1, 2018.

Under the proposal, Washington residential customers using 56 therms per month would see a $5.19 average increase in their monthly bill, while the average commercial customer using 234 therms per month would see a $16.53 increase. The new rates are expected to take effect Dec. 1.

NW Natural serves about 2 million customers in Oregon and southwest Washington.

Calif. ISO examines transmission options to displace need for Aliso Canyon, Jeff Stanfield - SNL

California's electric grid operator is examining how to boost carrying capacities on major transmission lines to bring more electricity from the Pacific Northwest to displace gas-fired generation tied to the Aliso Canyon natural gas storage facility in Los Angeles County.

The California ISO relies heavily on gas-fired generation to maintain reliable electric service in the region, and those generators require fuel from Aliso Canyon. However, Gov. Jerry Brown asked the California Energy Commission to plan for permanent closure of Aliso Canyon after he declared a state of emergency when Sempra Energy subsidiary Southern California Gas Co.'s facility developed a major leak that created a fuel supply shortage.

Early this year Energy Commission Chair Robert Weisenmiller and California Public Utilities Commission President Michael Picker urged the ISO to help by studying ways to increase transmission capacity to bring more hydroelectric power from the Pacific Northwest to Southern California.

The objective of the study is to determine the existing transfer limits on major long-distance transmission lines, known as interties, and develop alternatives to increase their capacity.

On Nov. 26 the ISO presented to stakeholders a report outlining progress on a study of options to increase the power carrying capabilities of the California-Oregon Intertie and Pacific Direct Current Intertie, which both connect Oregon and California. The goal is to produce a final draft transmission plan by Jan. 31, 2019, but future studies will be required.

The California-Oregon Intertie, also known as Path 66, is a combination of three jointly owned 500-kV alternating-current lines connecting California and Oregon with a combined southbound rated capacity of 4,800 MW and 3,675 MW northbound. The Pacific Direct Current Intertie, with a capacity of 3,100 MW northbound and 3,220 MW southbound, is an 846-mile north-south transmission link from the Celilo Converter Station near the Dalles Dam on the Columbia River to the Sylmar Converter Station near Los Angeles.

The aim of assessing whether capacities can be increased on these interties requires a complex evaluation of many variables and alternatives for coordinating operations between the Northwest and California. For example, fluctuations in hydropower production have an impact on the availability of transmission capacity.

Load forecast assumptions, variable renewable generation, transmission scheduling and market needs must be factored into the studies. Remedial action schemes to automatically trip generators to relieve transmission problems and many other operational issues are under review.

Cooperation with multiple transmission owners and other parties, such as the Bonneville Power Administration and the Northwest Power and Conservation Council, is required. The California Oregon Intertie, for example, has multiple owners and parties with scheduling rights in California and Oregon.

The ISO is not talking about a quick fix, but is addressing issues in terms of a "near-term" assessment for 2023 and a longer-term assessment for 2028.

In addition to transmission improvements, increased battery storage, energy efficiency and demand response are being examined for the eventual replacement of Aliso Canyon.

"Clearly, increasing the transfer of low-carbon supplies to and from the Northwest can be one of the multiple puzzle pieces that we must examine to build a cumulative phase out strategy," Weisenmiller wrote in the letter to the ISO, which Picker co-signed.

Climate initiatives, US court battles loom large heading into 2019, Esther Whieldon - SNL

Action on pending legal battles and federal rules, pressure from investors, and efforts by states to curb transportation emissions will help determine whether the U.S. makes headway in addressing climate change in 2019.

The U.N. Intergovernmental Panel on Climate Change found in October 2018 that the world will need to act quickly to slash carbon dioxide emissions and make substantial new investments in low-carbon infrastructure to limit and mitigate the impacts of climate change. And while global carbon emissions had not climbed in recent years, researchers recently reported that those emissions likely rose during 2018.

"We have a mere 12 years to turn around our actions in a radical way as it relates to climate change, to change our energy systems, our transportation systems, so we've got some real challenges," said Mindy Lubber, president of Ceres, a nonprofit sustainability advocacy organization.

Some of those changes are already in motion. Despite the absence of climate leadership by the U.S. — President Donald Trump has pledged to pull the U.S. from the Paris Agreement on climate change — a number of state governors, financial institutions and businesses have said they will continue to pursue the goals of the Paris accord. Moreover, Lubber expects many corporations, local and state governments in the U.S. and global investors to increase their climate-related activities in 2019.

Investor pressure, corporate action

Hundreds of investors have pledged to continue to pressure companies to address climate risks through actions such as the Climate Action 100+, which is backed by investors with nearly $30 trillion in assets under management.

The five-year initiative, which began in 2017, has targeted 161 companies, a number of which during 2018 issued climate reports and/or pledged to ratchet up their climate-related ambitions. Those companies include Royal Dutch Shell PLC, Dominion Energy Inc., AES Corp., Duke Energy Corp.and Southern Co. In addition, American Electric Power Co. Inc. met with a group of Climate Action 100+ investors in November 2018. Looking forward, FirstEnergy Corp. and Ameren Corp. are among the utilities expected to issue climate risk reports in 2019.

"I suspect that over the next year given the traction we have ... we will see more corporate action addressing climate change and other sustainability issues and doing so in a more focused, concentrated, systemic way," Lubber said in a Dec. 21, 2018, interview.

Heading into the 2019 corporate annual meeting proxy season that begins in late spring, investors have filed more than 30 climate-related resolutions with companies, according to a database maintained by Ceres. Not all of those will necessarily go to a vote as some may be withdrawn in exchange for companies pledging to take action on the issue, which is what happened with resolutions before a number of energy companies in 2018.

Evolving regional carbon markets

The state-level focus on decarbonization is expected to go beyond energy resources and include transportation emissions in 2019.

Building on the success of a regional cap-and-trade program for electricity emissions, nine Northeastern and mid-Atlantic states and the District of Columbia plan to spend 2019 hashing out the details for a program to reduce transportation-sector emissions.

In recent years, transportation emissions, primarily from motor gasoline combustion, have climbed even as emissions from electric generation plummeted thanks largely to slow electricity demand growth combined with cheap natural gas and declining costs of wind and solar generation. Climate experts have suggested that the goals of the Paris Agreement on climate change cannot be achieved without tackling transportation emissions.

"Climate change is really about all hands on deck," said Lynn Scarlett, vice president of policy and government affairs at The Nature Conservancy and a former U.S. Interior Department deputy secretary. "The emissions come from multiple sources, whether it's energy use, fuel use in transportation, building design and materials, agricultural practices, the list goes on."

Meanwhile, two states are expected to move forward with plans to link to or join the Regional Greenhouse Gas Initiative, or RGGI. New Jersey's Department of Environmental Protection in December 2018 proposed two rules to enable the state to re-enter the RGGI in 2020. The agency is holding two public hearings on the rules in January and is accepting written comments through mid-February. And the Virginia Air Pollution Control Board is expected in 2019 to finalize its proposed rule to link the state's power plant emissions reductions with RGGI.

Agencies poised to act

Two federal agencies in 2019 are expected to roll out or finalize rules that could impact investors' ability to press companies on climate change or rescind environmental protections.

Even as some states look to reduce transportation emissions, the Trump administration could order a freeze as early as March on Obama-era clean car standards that were set to ramp next decade and revoke California's federal waiver to set its own more stringent standards.

California and a coalition of states that use its standards have already challenged the move in federal appeals court, teeing up a potentially long and messy legal battle. The EPA and U.S. National Highway Traffic Safety Administration estimated the relaxed standards would increase vehicle CO2 emissions by 713 million metric tons over the lifetime of vehicles produced from model years 1979 through 2029.

The EPA is also moving to rewrite the Clean Power Plan, which was a key component of the Obama administration's plan for meeting U.S. decarbonization goals under the Paris accord. The agency is expected to finalize the replacement to the Clean Power Plan, called the Affordable Clean Energy Rule, in early 2019. The new regulation would incentivize efficiency upgrades at coal-fired power plants but, according to the EPA's own estimates, could also cause up to 1,400 premature deaths annually by 2030 due to an increase in fine particulate matter linked to cardiovascular disease.

In addition, the EPA has proposed to alter performance standards for the upstream oil and gas industry, including modifications to the way fugitive methane emissions are measured. The proposed changes would save the industry approximately $484 million through 2025 while allowing an additional 380,000 of greenhouse gas emissions over that span, according to the agency's estimates.

As for investor rights, U.S. SEC Chairman Jay Clayton said in a Dec. 13, 2018, speech that his agenda for the coming year includes reviewing the ownership thresholds investors must meet to file resolutions. He has also directed staff to develop recommendations for a possible rulemaking on the practices of proxy advisory firms that often have an outsized influence on the outcomes of shareholder votes. Clayton's remarks followed the agency's November 2018 proxy process roundtable and reflected many of the suggestions made by groups that have pushed back against the rising tide of environmental and social shareholder proposals.

Shareholder advocates view the proxy process as a key tool for pushing companies to pay attention to emerging issues, and some have worried that making it harder for investors to submit resolutions could hinder that process.

Climate battles rage on in courts

A number of legal battles involving climate change issues are also pending going into the new year.

Perhaps the most consequential of the cases, and one unlikely to be decided for some years, is a lawsuit by a group of youth seeking to force the federal government to take more action on climate change. A federal court ruling that the government must act on climate change could have wide-reaching implications for U.S. energy policy, particularly if the case is resolved during the current administration, which has moved to unwind regulations governing fossil fuel development.

If the group ultimately prevails, it would "really put the federal government through the paces," said Michael Gerrard, director of the Columbia Law School Sabin Center for Climate Change Law.

The federal government during the Obama administration began fighting the case in 2015. After a federal district court judge said the case could proceed to a trial-type hearing, the U.S. Court of Appeals for the 9th Circuit on Dec. 26, 2018, allowed the federal government to appeal that decision before the trial occurs. Regardless of what the 9th Circuit or district court judges decide, the case — *United States of America v. U.S. District Court for the District of Oregon, Eugene* (No. 18-73014) — will likely be appealed to the U.S. Supreme Court.

Also pending are a number of climate-liability lawsuits against oil majors brought by some states and cities. The New York attorney general also has sued Exxon Mobil Corp. in *State of New York v. Exxon Mobil* (No. 452044/2018) for allegedly misleading investors on the actions the company was taking to address its potential financial exposure to climate change risks. Exxon is fighting a similar lawsuit — *Ramirez v. Exxon Mobil* (No. 3:16-CV-3111) — in a federal district court in Texas brought by one of its investors, the Greater Pennsylvania Carpenters Pension Fund. The fund applied Dec. 21, 2018, to turn the case into a class-action lawsuit for all applicable investors.

US Congress braces for energy policy gridlock in 2019, Molly Christian - SNL

Democrats' hopes to address climate change and cut the country's dependence on fossil fuels the 116th U.S. Congress will hit likely resistance from Republicans, but they may still be able to provide more support for renewable energy.

After winning control of the U.S. House of Representatives, Democrats want to make climate change and its impacts on the economy a major focus of the new Congress that begins Jan. 3.

Democrats proposed to reestablish a select committee on climate change, and a group of House lawmakers introduced a proposal to create a feeon carbon dioxide emissions, with the proceeds largely going back to taxpayers in the form of a dividend. Furthermore, incoming Rep. Alexandria Ocasio-Cortez, D-N.Y., and other progressive lawmakers are promoting a Green New Deal that calls for the country to get 100% of its electricity from renewable resources within 10 years.

"There's going to be a bunch of [climate] bills dropped in the next couple months," a Democratic Senate committee aide said. "Everybody's going to be dropping bills."

House Democrats also want to conduct vigorous oversight of the Trump administration's efforts to undue major climate regulations. Rep. Frank Pallone Jr., D-N.J., who will chair the House Energy and Commerce Committee in the new Congress, announced plans to hold several climate-related hearings in early 2019 and has sought information from the EPA on its proposed repeal of several climate regulations, including the Clean Power Plan and rules to limit methane emissions from oil and gas production sites.

The House Natural Resources Committee will meanwhile probe the administration's efforts to open up more federal areas to energy production. Under Democratic leadership, the committee will look at the U.S. Department of Interior's five-year offshore drilling plan, the environmental impacts from onshore oil and gas drilling, and mountaintop mining, said Adam Sarvana, a spokesperson for committee Democrats.

Despite the lofty ambitions, a continued GOP majority in the Senate and President Donald Trump's efforts to undo many existing climate regulations make aggressive new laws on the issue unlikely.

Sen. John Barrasso, R-Wyo., chairman of the Senate Committee on Environment and Public Works, wrote in a Dec. 18, 2018, opinion piece for *TheNew York Times* saying that "we, collectively, have a responsibility to do something" on climate change. But he said taxes and "punishing global agreements" such as the Paris Agreement on climate change were not the solution, indicating Senate Republicans' probable rejection of legislation to price carbon emissions.

"People across the world are rejecting the idea that carbon taxes and raising the cost of energy is the answer to lowering emissions," Barrasso said, pointing to recent protests in France against a planned fuel tax increase that eventually caused the French government to suspend the policy.

Clean energy progress still possible

Even if Democrats cannot achieve their loftiest climate goals, they may be able to get extra support for renewable energy development.

Lawmakers were unable to pass legislation in late 2018 to extend certain tax credits, including for several smaller-scale renewable power technologies. Congress could give the legislation another try in 2019, offering the renewable industry a chance to push for new incentives and longer extensions to some credits.

"We're going to be looking for tax breaks for wind and solar and batteries and electric vehicles," Sen. Ed Markey, D-Mass., a clean energy advocate who sits on the Senate Environment and Public Works Committee, told S&P Global Market Intelligence.

Former President Barack Obama signed a bill into law in late 2015 that extended the federal wind energy production tax credit to projects that begin construction by the start of 2020 and phased out and extended an investment tax credit for solar energy facilities. Although the renewable industry was pleased with the agreement and has not made a big push for further extensions, Markey said developers will be open to more support. Additional or extended tax credits may be particularly helpful for the solar industry as uncertainty over the Trump administration's new tariffs on most imported solar cells and panels depress U.S. solar capacity installations.

"They'll want [more tax support]," Markey said. "You don't have to ask."

Both Democrats and Republicans are interested in pursuing infrastructure legislation in the new Congress, with the former hoping to attach funding and tax credits for clean

energy projects to that bill. But paying for an infrastructure package will be difficult, a hurdle that hindered progress on infrastructure legislation in the 115th Congress.

"I'm still really dubious of an infrastructure package," said Sarah Ladislaw, director of the Center for Strategic and International Studies' energy and national security program. "And I think an infrastructure package is the closest place that you get to getting some deliverables on [energy] infrastructure."

Where bipartisan work could happen

Despite the partisan divide over how to tackle climate change, energy leaders in Congress see areas where the Democrat-controlled House and GOP-held Senate can work together.

"We'll work through how we can pair up with an energy team on the House side that's going to be coming at it from a different view," Senate Energy and Natural Resources Committee Chairman Lisa Murkowski, R-Alaska, said in an interview. "But I think we've got a lot of room to work."

Among other areas, Murkowski said both parties could collaborate on measures to improve energy efficiency, research and development funding, and grid cybersecurity and modernization. "There's no shortage of good issues to be working on," she said. "I think we've got a lot of space in the energy sector to be working jointly with a mixed Congress."

Electric cooperatives also hope to address what they said were unintended consequences of the 2017 tax law, fixes that could likely get bipartisan support.

The 2017 tax bill considered government grants, including from the U.S. Department of Agriculture's Rural Utilities Service, to be outside revenue for purposes of determining what cooperatives or public power entities are tax-exempt. To maintain their tax-exempt status, rural utilities must get at least 85% of their revenue from members, a share that could be harder to achieve if government grants are counted as income, said Kirk Johnson, senior vice president of government relations for the National Rural Electric Cooperative Association.

Excluding rural utilities from the new requirement will be a big priority for NRECA in 2019. "For several of our members, it's a big darn deal," Johnson said.

elly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 01/18/2019 08:06:03 AM

To: Aldis.Raisters@gapac.com; kwilson@legadv.com; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser com; mruckwardt@schn.com; todd.wiseman@solvay.com; tom@richlandpaper.com; Wes.Hill@gapac.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; mary.mccordic@shell.com; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Amy Beck <amy.beck2@boeing.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Brad Beavers <bbeavers@timberproducts.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@nippondynawave.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Charley Hathaway <charley.hathaway@nwpsllc.com>; Charley <[redacted]>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Courtney Smith <courtney.smith@shell.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Dan Coyne <dancoyne@coynenet.com>; David Barge <DABarge@marathonpetroleum.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Tobin <DavidTobin@boisepaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Fawn Barrie <fbarrie@legadv.com>; Gary Londo <gary.j.londo@boeing.com>; Graham Bailey <graham.bailey@nippondynawave.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Ponderay <JAMIN.SIMMONS@resolutefp.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; John Carr <jcarr@icnu.org>; John Carr <johndcarr1@msn.com>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.org>; Mark Nelson <pacounsel@pacounsel.rog>; Mark Steele <steele@norpac.com>; Mark Steele <Mark.Steele@norpac.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@rocktenn.com>; Michael Kuhn <mike.kuhn@westrock.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Kaiser, Nick <Nick.Kaiser@nippondynawave.com>; Pat Ealy <pat.ealy@akzonobel.com>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Pat Lydon <PLydon@lhs.org>; Pat Ortiz <pat.ortiz@westrock.com>; Paul Langley; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Samuel Liebelt <samuel.liebelt@westrock.com>; Sandi Swarthout <sswarthout@capconn.net>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <SRHawley@marathonpetroleum.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steven Castracane <steven.castracane@linde.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Yarborough <Tom.yarborough@weyerhaeuser.com>; Tony Hardenbrook; Tyler Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Chuck Gates [redacted] Nancy Holbrook <Nancy.Holbrook@bp.com>; Nancy Hollbrook <Nancy.Richardson@bp.com>; Robert Pierce <robert.pierce@shell.com>; Rusty Williams <williwk@bp.com>; Bill Gilmore <billmg@penwool.com>; Chad Stokes <cstokes@cablehuston.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Jake Evans <Jake.evans@onsemi.com>; Jared Sommer <sommerj@byui.edu>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kyle Williams <williamsk@byui.edu>; Nick Avenetti <nick@perlite.com>; Phil Foss <phil.foss@onsemi.com>; Rick Stricker <rstricker@baf.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Sam Merrick <merricks@byui.edu>; Scott Kennedy <scott.kennedy@kaisertwd.com>; Sharon Andersen <Sharon.w.anderson@intel.com>; Steve O'Brien <sobrien@baf.com>; Tommy Brooks <tbrooks@cablehuston.com>

Subject: Northwest Pipeline Update Memo 1-17-19

Attachments: Northwest Pipeline Update Memo 1-17-19.pdf

AWEC members,

Please see the attached Northwest Pipeline Update memorandum. There will be a Stage III Entitlement effective today and Northwest plans to file an emergency fuel filing. Please let us know if you have questions.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

CABLE HUSTON LLP

MEMORANDUM

TO:	John Carr, Executive Director, Alliance of Western Energy Consumers Ed Finklea, Director of Natural Gas, Alliance of Western Energy Consumers
FROM:	Chad M. Stokes
DATE:	January 17, 2019
RE:	Northwest Pipeline Update—(Stage III Entitlement) and (Emergency Fuel Filing)

Stage III Entitlement North of Kemmerer Compressor Station

Northwest Pipeline's (Northwest) current account balance at the Jackson Prairie Storage Facility is under 1 Bcf due to cooler weather and the subsequent drafting of the system North of the Kemmerer Compressor station. With cooler weather anticipated next week, intermittent volumes from Westcoast due to in-line inspections and declining deliverability from Jackson Prairie, Northwest will be implementing a Stage III (13%) Entitlement North of the Kemmerer Compressor station effective **January 18, 2019.**

Northwest is also asking Shippers to voluntarily reduce nominations through the Rangely compressor station to avoid the issuance of an Operational Flow Order (OFO). Current operational capacity is 370,000 Dth/d. If nominations exceed 370,000 Dth/d, Northwest will issue an OFO.

Emergency Fuel Filing

Northwest is also preparing to file an Emergency Fuel Filing with the Federal Energy Regulatory Commission seeking approval to change the current system fuel rate from 1% to 1.61% effective February 1, 2019. The increase in the fuel rate is due to the Enbridge incident. The pipeline has changed its typical gas flows and using significantly more compression than normal. Northwest argues that it has under recovered for fuel costs for the past several months. The normal fuel filings happen in April and October, and Northwest anticipates that a new filing will also happen in April. Out of cycle fuel filings are very uncommon on Northwest.

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 01/17/2019 03:01:55 PM

To: Aldis.Raisters@gapac.com; kwilson@legadv.com; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; mruckwardt@schn.com; todd.wiseman@solvay.com; tom@richlandpaper.com; Wes.Hill@gapac.com; mary.mccordic@shell.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; randy.schultz@bp.com; rgreenwell@uetllc com; [redacted] rick.kunz@shell.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Amy Beck <amy.beck2@boeing.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Brad Beavers <bbeavers@timberproducts.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@nippondynawave.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Charley Hathaway <charley.hathaway@nwpsllc.com>; Charley <[redacted]>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Courtney Smith <courtney.smith@shell.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Dan Coyne <dancoyne@coynenet.com>; David Barge <DABarge@marathonpetroleum.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Tobin <DavidTobin@boisepaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Fawn Barrie <fbarrie@legadv.com>; Gary Londo <gary.j.londo@boeing.com>; Graham Bailey <graham.bailey@nippondynawave.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Ponderay <JAMIN.SIMMONS@resolutefp.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide com>; Larry Voos <larry.voos@norpacpaper.com>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.org>; Mark Steele <steele@norpac.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@rocktenn.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Kaiser, Nick <Nick.Kaiser@nippondynawave.com>; Pat Ealy <pat.ealy@akzonobel.com>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Pat Lydon <PLydon@lhs.org>; Pat Ortiz <pat.ortiz@westrock.com>; Paul Langley; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Samuel Liebelt <samuel.liebelt@westrock com>; Sandi Swarthout <sswarthout@capconn.net>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <SRHawley@marathonpetroleum.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steven Castracane <steven.castracane@linde.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Yarborough <Tom.yarborough@weyerhaeuser.com>; Tony Hardenbrook; Tyler Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Bill Gilmore <billmg@penwool.com>; Chad Stokes <cstokes@cablehuston.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Jake Evans <Jake.evans@onsemi.com>; Jared Sommer <sommerj@byui.edu>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kyle Williams <williamsk@byui.edu>; Nick Avenetti <nick@perlite.com>; Phil Foss <phil.foss@onsemi.com>; Rick Stricker <rstricker@baf.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Sam Merrick <merricks@byui.edu>; Scott Kennedy <scott.kennedy@kaisertwd.com>; Sharon Andersen <Sharon.w.anderson@intel.com>; Steve O'Brien <sobrien@baf.com>; Tommy Brooks <tbrooks@cablehuston.com>; Chuck Gates [redacted] Nancy Holbrook <Nancy.Holbrook@bp.com>; Nancy Hollbrook <Nancy.Richardson@bp.com>; Robert Pierce <robert.pierce@shell.com>; Rusty Williams <williwk@bp.com>; Keegan Moyer <kmoyer@energystrat.com>; Jeff Fishman <jfishman@energystrat.com>; Jeff Burks <jburks@energystrat.com>; Kelly Francone <kfrancone@energystrat.com>

Subject: AWEC Energy Brief

This energy brief is provided by Energy Strategies

on behalf of the Alliance of Western Energy Consumers.

http://www.awec.solutions

Oregon utility regulators suspend proceedings in Hydro One/Avista merger

case, **Sania Khan** **- SNL**

The Oregon Public Utility Commission suspended its proceedings in the pending merger case of Hydro One Ltd. and Avista Corp. indefinitely, given the rejection of the $5.3 billion transaction by state regulators in Washington and Idaho.

The PUC said in a Jan. 14 order that the approval of the merger by the Washington Utilities and Transportation Commission and the Idaho Public Utilities Commission "is necessary" for the transaction to move forward in Oregon.

The companies need to seek a reversal of decisions in Washington and Idaho either through "appeals or other means" in order to provide a justiciable issue for the Oregon commission to address, the commission said. *(OPUC Order 19-008)*

Action Agencies to Expedite Release of Columbia Basin Federal Dam EIS to 2020, K.C. Mehaffey – Clearing Up

An environmental impact statement assessing the impacts of 14 federal dams in the Columbia Basin will be completed a year early, in 2020, the action agencies said in a Jan. 9 news release.

The U.S. Army Corps of Engineers, Bureau of Reclamation and BPA released a new timeline that includes issuing a final EIS in June 2020 instead of March 2021, and a record of decision on Sept. 30, 2020, instead of Sept. 24, 2021.

The change is the result of President Donald Trump's Oct. 19 Presidential Memorandum on Promoting the Reliable Supply and Delivery of Water in the Wes

t, which also speeds up water projects for irrigators in the Klamath Basin and California's Central Valley.

According to the news release, the agencies submitted a new schedule to the Council on Environmental Quality for consideration in December, and the CEQ recently confirmed that the schedule allows the agencies to produce an EIS that complies with the National Environmental Policy: Act and the president's memorandum.

Under a federal court order to develop a new BiOp and EIS for the Federal Columbia River Power System operations, the action agencies have been working since

September 2016 on the document, which will include an examination of removing four lower Snake River dams.

The expedited schedule now completes a draft EIS m February instead of late March 2020, leaving a year and four months to receive and review public comments before preparing a final EIS which identifies a preferred alternative.

"The co-lead agencies remain committed to developing and evaluating alternatives that best balance the multiple purposes of these 14 projects, ' the news release stated.

Idaho Power wants to Test Time-of-Day Pricing in Oregon, Dan Catchpole – Clearing Up

Idaho Power asked the Oregon PUC in a Dec. 28 application to approve a time-of-day pricing pilot program for its customers in the state *[ADV 901].*

The utility has proposed a limited trial with a small difference between peak and off-peak pricing, slated to start June 1. The first results would be provided in the utility's 2021 smart grid report to the Oregon PUC.

The pilot came out of talks with commission staff that started as part of the utility's annual smart grid report *[UM 1675).* Commissioners in July recommended the company file a proposal for the pilot program by Dec. 31.

Idaho Power already offers voluntary time-of-day (TOD) pricing in Idaho. The utility has a low participation rate there, and the findings "indicated there was no statistically significant change in overall energy consumption observed in the study participants," the utility said in its Dec. 28 filing.

The Northwest lags behind the rest of the country in customer participation in TOD rates, according to Clearing Up's analysis of Energy Information Agency data.

Peak and off-peak rates and time periods were established in a two-step process, Idaho Power said in the filing.

The company first identified peak periods based on changes in its net power-supply expenses, and then modified the peak periods to make it easier for customers to change their behavior. For example, Idaho Power's peak demand during summer months is from 1 p.m. to 10 p.m. However, a nine-hour-long peak that covers the entire evening leaves customers little room to

modify their energy consumption behavior, so the utility narrowed the summer peak hours to 3 p.m. to 9 p.m. on weekdays.

In the proposal, summer prices would run from June 1 through Aug. 31. During those months, the peak rate of 13.17 cents per kWh applies on weekdays from 3 p.m. to 9 p.m. The non-peak rate of 13.04 cents/kWh applies from 9 p.m. to 3 p.m. on weekdays, and all hours on weekends and holidays.

The non-summer prices apply from Sept. 1 through May 31. The peak rate of 8.05 cents/kWh applies on weekdays from 7 a.m. to 9 a.m. and 3 p.m. to 9 p.m. The off-peak rate of about 7.95 cents/kWh applies from 9 a.m. to 3 p.m. and 9 p.m. to 7 a.m., and all hours on weekends and holidays.

The rate design also includes an $8 a month service charge.

The differences in price between peak and off-peak rates are about 1 percent for both summer and non-summer rates. The seasonal difference is much larger. Summer rates are 164 percent the size of non-summer rates.

The almost non-existent price differences stand in contrast to the vast majority of TOD pricing schemes in the U.S. More than 70 percent of TOD rates have a ratio of at least 2:1 between peak and off-peak, according to a 2017 report from the Brattle Group.

The report showed no TOD rates with as slim a price differential as proposed by Idaho Power.

For TOD rates with two periods, the median price differential in 2016 was 10 cents/kWh, according to the Brattle Group's analysis.

The differences in peak and non-peak rates in Idaho Power's proposal were based on the utility's actual changes in net power-supply expenses, according to the filing.

"Although the differentials between peak and off peak periods of the proposed rate design are small, the design is cost-based and will help minimize the financial impact to the company resulting from implementation of an optional TOD Pilot Plan during a time when standard residential rates cannot be reset closer to the cost to serve," Idaho Power noted in its filing.

The company proposed limiting participation to no more than 375 customers who have smart meters.

The pilot program was designed with input

from OPUC staff members and the Oregon Citizens' Utility Board.

Avista, Duke Energy Funding Open-Source Smart-Grid Platform, Rick Adair – Clearing Up

A joint investment by an Avista subsidiary and Duke Energy will underwrite the development of open source software that will form the core of a system that allows utilities to create smart-grid applications, much like third-party applications for smartphones.

These applications will deliver significant benefits to customers, the companies said, including information and tools to help them manage their energy usage.

Also of note, the companies said, is that this effort "marks the first time multiple utilities have collaborated to create open-source software."

The software will use interoperability concepts, along with distributed intelligence ("internet of things"), to share information among devices that have different communications protocols, and provide more effective integration of products from different hardware and software vendors.

This approach, the companies said, will allow utilities to "more efficiently integrate, coordinate and optimize diverse assets," including the energy grid, traditional and renewable generation, and customer assets.

The open-source software of the core platform will be developed by Santa Clara, Calif.-based Open Energy Solutions and its partners.

Ultimately, the software will be given to an open source foundation, making it available to everybody, worldwide, Mark Gustafson, the senior manager of business development and strategy for Avista Development, told Clearing Up.

It will be provided free through the foundation, which will promote widespread adoption and support for the software as many utilities use it to make upgrades to their grids.

The sorts of "upgrades" and "applications" possible with the software are "currently only available to large integrated investor-owned utilities that can afford the price tags of the proprietary systems," Gustafson said. "When you go with an open-source model, it opens up the same technology-better technology, we think-to utilities like municipalities and co-ops."

Ultimately, he added, this approach allows utility customers to have access to "better applications around this changing distributed energy resource environment."

Gustafson expects an example "app" to be provided with the software "on day one" will manage voltages to address issues arising from variable energy resources on a grid.

Wade Malcolm, OES CEO, said in a press release, "We see this as an opportunity to fill a gap the industry has previously been unable to fill with more traditional centralized software solutions."

OES, founded by the ITOCHU Corporation of Japan in late 2016, has provisionally dubbed the project "Open Distributed System Platform," or OpenDSP.

The company says OpenDSP's core open-source software platform will provide key common services needed to support applications that manage and operate assets. The platform will be designed to handle assets on high, medium and low voltage networks, and to accommodate interactions between traditional transmission systems, distribution systems, and customer assets in an integrated fashion.

Avista Development, an unregulated subsidiary of Avista Corp., invests in assets it says leverage the strengths of partnerships and enhance the economic vitality of Avista's utility service areas.

Some of its other investments include taking stakes in smart-grid company Spirae, predictive analytics company Trove and the Energy Impact Partners venture fund.

The venture fund's investments include Sense Labs, which developed an energy monitor that uses advanced signal processing to tease out device signatures from household current variations sampled millions of times per second.

Clean energy risks, potential to transform business model seen in PG&E crisis, Garrett Hering - SNL

As PG&E Corp. and its utility subsidiary Pacific Gas and Electric Co., or PG&E, teeter on the edge of insolvency over mounting wildfire liabilities, clean energy advocates say California's ambitious energy efficiency, renewable energy and overarching climate policy targets are in jeopardy.

But the debacle could also breathe new life into legislative and regulatory reforms seen as critical for California to achieve its clean energy targets, they added, which include slashing greenhouse gas emissions 40% by 2030 and 80% by midcentury, both from 1990 levels, and reaching 60% renewable electricity by 2030 en route to total decarbonization of California's power sector by 2045.

"PG&E is the largest clean energy investor in the county and the state," Ralph Cavanagh, co-director of the Natural Resources Defense Council's energy program, said in an interview. With the specter of a sweeping reorganization now clearly in view through a likely Chapter 11 bankruptcy protection filing at the end of January, the San Francisco-headquartered utility's clean energy investments are "all at risk," according to Cavanagh, who noted recently approved electric-vehicle charging programs and energy storage outlays, and long-standing renewable energy and energy efficiency commitments.

"They must be defended, but they are not doomed," he added. When Pacific Gas and Electric filed for bankruptcy protection in the wake of the 2000-2001 energy crisis, the NRDC helped to protect the utility's clean energy programs. "The defense was successful in 2001 and it can be again," Cavanagh said.

Such efforts would come on top of considerable headwinds renewable energy resources under contract to California electricity suppliers are already facing. Local power agencies known as community choice aggregators have assumed a significant role in procuring new renewable resources in California, owing in large part to a customer exodus in PG&E's service territory, while wildfire-related financial pressures on the utility have exposed existing contract counterparties to new risks.

S&P Global Ratings, for instance, on Jan. 11 issued a multi-notch downgrade into junk status of Berkshire Hathaway Energy's Topaz Solar Farm, the single largest solar project in the United States, and the operators of two other power plants, because their output is committed to PG&E under long-term contracts. Natural gas pipeline operators that supply gas to PG&E also are seeing their credit ratings at risk.

Renewable power plant developers now fear they may have to defend their legacy

contracts in court, many of which were signed at prices well above today's levels.

"As underscored by [California] Governor [Gavin] Newsom, contracts with energy suppliers, including renewable energy providers, need to be honored in the PG&E bankruptcy proceeding," Jan Smutny-Jones, CEO of the Independent Energy Producers Association, said in an email. "Terminating these contracts in bankruptcy will have costs and send the wrong signal to future investments in clean energy."

'Critical clean energy partners'

Yet, defending PG&E's clean energy programs and contracts in bankruptcy court, even if successful once again, would not go far enough to address the current crisis, according to Cavanagh. "California's utilities are all exposed to these [wildfire] risks and the risks have to do not just with climate change but with California's dysfunctional system of wildfire liability," he said. "California's electric utilities are critical clean energy partners. If they face financial ruin ... we're all losers."

While state lawmakers in 2018 passed a measure, Senate Bill 901, that gave utilities limited financial protection, they neglected deeper reforms to wildfire liability. In particular, Cavanagh called on legislators to change how the state applies the legal doctrine of "inverse condemnation," under which courts have found utilities strictly liable for wildfire damages caused by their equipment even if they followed safety protocols.

For now, at least, California lawmakers seem hesitant to put such reform on a fast track to avert PG&E's bankruptcy filing.

As the crisis continues to unfold, however, Cavanagh believes opponents of wildfire liability reform — including insurance companies, ratepayer advocates and attorneys for wildfire victims — will find "fresh evidence" that a fundamental change is necessary. "When utilities go into bankruptcy, wildfire victims become one more set of creditors facing an inadequate amount of money in competition with everyone else," he said. "That's not where we want our wildfire victims and it's not where we want our clean energy programs."

'Perfect moment to restructure the utility business model'

While PG&E has yet to unveil its reorganization strategy, the sale of

its natural gas business is one option. Another is the sale of its electricity transmission assets, suggested Craig Lewis, executive director of the Clean Coalition, a California advocacy group that promotes distributed energy resources.

"While I've seen discussion of divesting gas assets, if there's only going to be one divestment strategy for PG&E to raise money I believe it should be divesting the transmission assets," Lewis said. Doing so would eliminate a "conflict of interest" at the utility between transmission and distribution grid investments, he added, pointing to higher investment returns for the former but also higher risks related to wildfires. "The transmission grid is the source of a lot of these fire issues and it is driving PG&E into this path of bankruptcy," Lewis said.

Freed from transmission assets, the utility could then transform into a distribution grid operator, he added, focused on local renewable resources, energy storage, demand response and other distributed energy technologies that could reduce or eliminate the need for investments into the transmission grid.

Given the wildfire risks associated with its transmission assets and the potential benefits of developing a more modern, distributed energy system, Lewis believes PG&E's transformation could have an "unintended upside" of setting an example for broader electricity market changes. "This is a perfect moment to restructure the utility business model to have a separation between the transmission grid and the distribution grid, and ultimately to force investor-owned utilities to divest [from] transmission grid investments," he said.

PG&E's troubles ripple into gas provider Ruby Pipeline's finances, credit, Allison Good - SNL

The looming bankruptcy of California's largest utility is putting financial pressure on a key supply line of gas to the West Coast, with Ruby Pipeline LLC's credit downgraded to junk status by one rating agency and facing similar downgrades by the other two.

Pacific Gas and Electric Co., Ruby's biggest shipper, and parent company, PG&E Corp., on Jan. 14 announced plans to seek bankruptcy protection before the end of the month, citing billions of dollars in liability costs for wildfires in California. "This has the

potential for an earnings shortfall at Ruby which ... will modestly pressure leverage, with the extent depending on the final status of the contracted capacity, Ruby's ability to re-contract capacity or renegotiate its contracts with PG&E and ultimate rates," midstream energy analysts at Fitch Ratings wrote in a Jan. 15 note.

Interstate natural gas pipelines like Ruby, which carries gas from the Rockies to Oregon and northern California, transport volumes under fixed reservation charges that are paid monthly regardless of the actual gas volumes moved or stored. Should PG&E Corp. and the utility company Pacific Gas and Electric move the Chapter 11 process forward, a bankruptcy court could reject the gas utility's shipper agreements with Ruby, which total 375,000 Dth/d and account for 27.2% of the pipeline's contracted capacity, according to S&P Global Market Intelligence's Index of Customers and tariff data.

Credit ratings for shippers with firm contracts on Ruby Pipeline

Shipper name	Shipper ultimate parent	Shipper S&P credit rating	Max daily transportation quantity (Dth)
Pacific Gas and Electric Co.	PG&E Corp.	CC	375,000
BP Energy Co.*	BP PLC	A-	325,000
Anadarko Energy Services Co.*	Anadarko Petroleum Corp.	BBB	200,000
Shell Energy North Am (US) LP	Royal Dutch Shell PLC	A+	125,000
Pioneer Natural Resources Co.	Pioneer Natural Resources Co.	BBB	75,000
Southwest Gas Corp.	Southwest Gas Holdings Inc.	BBB+	57,500
Occidental Energy Marketing*	Occidental Petroleum Corp.	A	50,000
HighPoint Resources Corp.	HighPoint Resources Corp.	B	50,000
Marathon Oil Co.*	Marathon Oil Corp.	BBB-	40,000
Ursa Piceance LLC*	Ursa Resources Group II LLC	NA	25,000
El Paso Prod Oil & Gas Co*	EP Energy Corp.	NA	25,000
J. Aron & Co. LLC*	The Goldman Sachs Group Inc.	BBB+	15,000
Cascade Natural Gas Corp.	MDU Resources Group Inc.	BBB+	15,000
Total			1,377,500

Data compiled Jan. 15, 2019.
NA = not applicable
* For shippers that do not have a credit rating or have a rating of NR, the rating for the shipper ultimate parent is shown.
Contract data is as reported on Q1'19 Index of Customers.
Source: S&P Global Market Intelligence

Both Fitch and S&P Global Ratings decided to keep Ruby's BBB- credit rating, the lowest investment-grade rating, while Moody's downgraded the pipeline to two notches below investment grade at Ba2. S&P Ratings placed Ruby on CreditWatch with negative implications.

All three major U.S. agencies have issued multi-notch downgrades for the parent company and the utility subsidiary, pushing it deep into speculative-grade territory.

A formal bankruptcy filing alone, however, will not automatically trigger a downgrade for

Ruby, according to S&P Global Ratings midstream analyst Michael Grande.

"I think PG&E had a request from different counterparties for over $1 billion in collateral postings, which they haven't done yet, but under the contract, they're required to [pay it out]," he said in an interview. "We would want to understand all of that first."

Moody's also cited "uncertainty about ... the ability of Ruby to realize in full its right to collateral against the PG&E contracts" in its Jan. 15 note, but Kinder Morgan Inc., which jointly owns the 1.5-Bcf/d pipeline with Canada's Pembina Pipeline Corp., is not at risk given the fraction of corporate EBITDA that revenues from Ruby represent.

"I can say with confidence that [a Kinder Morgan downgrade] is highly unlikely," Grande said.

Other shippers on Ruby, he added, should also be protected from knock-on downgrades because the pipeline should continue operating.

TransCanada Corp.'s Gas Transmission Northwest LLC pipeline and Energy Transfer LP's Transwestern Pipeline Co. LLC are also exposed to PG&E, but the utility accounts for only 1.1% of contracted capacity on Transwestern, while Gas Transmission Northwest's credit quality is insulated from a PG&E bankruptcy because of lower leverage and a "favorable supply situation," midstream analysts at CreditSights wrote in a Jan. 13 note to clients.

elly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Kelly Francone <kfrancone@energystrat com>

Sent time: 01/10/2019 02:02:05 PM

To: Aldis Raisters@gapac com; kwilson@legadv com; Martha_C@columbiasteel com; marycatherine mcaleer@weyerhaeuser com; mruckwardt@schn com; todd wiseman@solvay com; tom@richlandpaper com; jeff steed@northwesthardwoods com; mary mccordic@shell com; Beth@cmsnaturalgas com; CMS@cmsnaturalgas com; James_Clarken@oxy com; jpino@uetllc com; randy schultz@bp com; rgreenwell@uetllc com; [redacted] rick kunz@shell com; Ted@cmsnaturalgas com; teresa acosta@calpinesolutions com; kfraser@energystrat com; kmoyer@energystrat com; Alicia Fuentes <Alicia Fuentes@solvay com>; Alicia Givens <agivens@pacounsel org>; Amy Beck <amy beck2@boeing com>; Ben Byman <Ben Byman@lvpnp com>; Bernie McNamee <bmcnamee@timberproducts com>; Bill Castleberry <Bill Castleberry@emeraldmaterials com>; Brad Beavers <bbeavers@timberproducts com>; Bradley Mullins <brmullins@mwanalytics com>; Brian Wood <brian wood@nippondynawave com>; Calli Daly <calli daly@kochps com>; Calvin Greene <[redacted]; Charley Hathaway <charley hathaway@nwpsllc com>; Charley <[redacted]>; Chris Horn <chris_h@columbiasteel com>; Clifford Barr <Clifford G Barr@tsocorp com>; Courtney Smith <courtney smith@shell com>; Craig Anneberg <Craig anneberg@norpacpaper com>; Dan Coyne <dancoyne@coynenet com>; David Barge <DABarge@marathonpetroleum com>; David Clemens <David Clemens@darigold com>; David Elliot <davidelliott@boisebuilding com>; David Tobin <DavidTobin@boisepaper com>; Delee Shoemaker <delees@microsoft com>; Dennis <Dennis Draleau@recsilicon com>; Don Hendricksen <donald j hendrickson@boeing com>; Donna Gehlhaart <Donna Gehlhaart@ipaper com>; Doug Krapas <dougkrapas@iepco com>; Drew Gilpin <drew gilpin@evrazna com>; Ed Finklea <efinklea@awec solutions>; Fawn Barrie <fbarrie@legadv com>; Gary Londo <gary j londo@boeing com>; Graham Bailey <graham bailey@nippondynawave com>; Greg Vaughn <greg vaughn@resolutefp com>; Irene Plenefisch (LCA) <irenep@microsoft com>; Janese Pearson <Janese Pierson@ipaper com>; Ponderay <JAMIN SIMMONS@resolutefp com>; Jeff Johnson <Jeff Johnson@recsilicon com>; Jennifer <jenny@pacounsel org>; Jennifer Hackett <Jena Hackett@ipaper com>; Jim Stanton <jstanton@microsoft com>; JL Wilson <jlwilson@pacounsel org>; John Bob <John Bob@am dynonobel com>; John Carr <jcarr@awec solutions>; Josh Weber <jdw@dvclaw com>; Justen Rainey <JustenR@pacounsel org>; Ken Dey <ken dey@simplot com>; Ken Johnson <ken johnson@recsilicon com>; Kenneth Li <kenneth Li@gapac com>; Kevin Davis <kevin_davis@iepco com>; Kevin Rasler <kevin_rasler@iepco com>; Khaly Niang <Khaly Niang@airliquide com>; Larry Voos <larry voos@norpacpaper com>; Leslie Adams <adamsla@airproducts com>; Luke Hart <Luke Hart@axiall com>; Marcie Peters <marcie peters@solvay com>; Mark Dunn <mark dunn@simplot com>; Mark Nelson <pacounsel@pacounsel rog>; Mark Steele <Mark Steele@norpac com>; Matt Upmeyer <matt upmeyer@lambweston com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick Houser@ipaper com>; Michael Culver <michael culver@ipaper com>; Michael Kuhn <MKuhn@rocktenn com>; Michael Kuhn <mike kuhn@westrock com>; Michael Padgett <Michael Padgett@alcoa com>; Mike Hale <Michael Hale@simplot com>; Mitch Maynard <mmaynard@deltaenergyllc com>; Kaiser, Nick <Nick Kaiser@nippondynawave com>; Pat Ealy <pat ealy@akzonobel com>; Patrick Loupin <PatrickLoupin@packagingcorp com>; Pat Lydon <PLydon@lhs org>; Pat Ortiz <pat ortiz@westrock com>; Paul Langley; Ralph Saperstein <Ralph@ralphsaperstein com>; Randy Clancy <clancyrb@airproducts com>; Raymond L Beard <BEARDRL@airproducts com>; Richard White <richard a white7@boeing com>; Rob Buckingham <rob buckingham@norpacpaper com>; Rob Freres <rtfreres@frereslumber com>; Ryan Beaver <Ryan Beaver@weyerhaeuser com>; Ryan Spiller <Ryan@capconn net>; Samantha Julian <Samanthaj@pacounsel org>; Samuel Liebelt <samuel liebelt@westrock com>; Sandi Swarthout <sswarthout@capconn net>; Scott Gutting <sgutting@energystrat com>; Scott Hawley <SRHawley@marathonpetroleum com>; Scott Wagener <Scott Wagener@spfibertech com>; Skylar <Skyler Mlasko@northwesthardwoods com>; Spiro E Xenos <spiro e xenos@boeing com>; Stan Jackson <S Jackson@shell com>; Steven Castracane <steven castracane@linde com>; Tim Boyd <[redacted]; Tim Root <timothy root@axiall com>; Tom Yarborough <Tom yarborough@weyerhaeuser com>; Tony Hardenbrook; Tyler Pepple <tcp@dvclaw com>; Tyne Brownlow <tyne brownlow@ipaper com>; Ben Byman <ben byman@weyerhaeuser com>; Bill Gilmore <billmg@penwool com>; Clay Riding <clayr@nw-iw com>; Dave Rickman <dave rickman@kaisertwd com>; David Hawk <[redacted]; David Hawk <[redacted]; David Jones <david jones@swansongroup biz>; Bryck (US), Drew M <drew m bryck@boeing com>; Hendricksen, Don <[redacted]>; JaDPrice <JaDPrice@gapac com>; Jared Sommer <sommerj@byui edu>; Jeff Steed <jeff steed@northwesthardswoods com>; Jim Duke <jduke@idahoan com>; Joe Burrell <Joseph g burrell@jci com>; Keith Warner <keith c warner@boeing com>; Kristine Dippold <Kristine A Dippold@boeing com>; Kyle Williams <williamsk@byui edu>; Laura Jane Schaefer <schaefel@ohsu edu>; Nick Avenetti <nick@perlite com>; Phil Foss <phil foss@onsemi com>; Rick Stricker <rstricker@baf com>; Ron Tarver <ron tarver@swansongroup biz>; Steve O'Brien <sobrien@baf com>; Tom Rouleau <Tom Rouleau@darigold com>; Wes Hill <Wes Hill@gapac com>; Chuck Gates [redacted] Nancy Holbrook <Nancy Holbrook@bp com>; Nancy Hollbrook <Nancy Richardson@bp com>; Robert Pierce <robert pierce@shell com>; Rusty Williams <williwk@bp com>; Jeff Burks <jburks@energystrat com>; Jeff Fishman <jfishman@energystrat com>; Millicent Pichardo <mpichardo@energystrat com>

Subject: AWEC Energy Brief

AWEC

This energy brief is provided by Energy Strategies
on behalf of the Alliance of Western Energy Consumers.

http://www.awec.solutions

Wash. regulators refuse to review Hydro One/Avista merger plan, Jeff Stanfield - SNL

Washington state utility regulators declined to reconsider their earlier rejection of the acquisition of Spokane, Wash.-headquartered Avista Corp.by Hydro One Ltd., creating a further roadblock to the Canadian company's desire to expand.

Avista Corp. through its Avista Utilities Inc. brand serves 383,000 electric and 348,000 natural gas customers in Washington, Idaho and Oregon. It also owns a small utility in southern Alaska.

The Washington Utilities and Transportation Commission on Dec. 7, 2018, denied the merger application, but the companies filed a petition for reconsideration, saying the commission "misapprehended" the political risks that the province of Ontario's ownership stake in Hydro One would pose for Avista's

electric and gas customers in that state. The province owns 47% of Hydro One's shares, and the provincial government can appoint or remove the company's CEO and board members.

Washington's regulators simply refused to review that point by taking no action on the companies' petition for reconsideration and instead on Jan. 8 issued a notice of denial of the petition "by operation of law." As the commission stated in its notice, the regulators decided to take no action on the petition within 20 days so the petition was automatically denied under the state's Administrative Procedure Act.

The commission did note that the petition failed to establish sufficient grounds for rehearing the case, which the act defines as changed conditions since the commission entered the order, unintended effect on the petitioner resulting from the order or any other sufficient cause the commission did not consider.

The Idaho Public Utilities Commission on Jan. 3 denied the merger, concluding that state law expressly prohibits the transfer of assets from a regulated utility to an entity that is owned or controlled by another state.

Oregon has yet to render its decision, but a law judge there said the state Public Utility Commission was reviewing Washington's decision to determine its "procedural impact" and had no schedule for concluding the case. Avista serves only gas customers in Oregon, and receives 4.46% of its retail operating revenues from the state.

The companies had no immediate response on Jan. 8 to the Washington decision.

Idaho becomes 2nd state to outright reject Avista, Hydro One deal, Amy Poszywak - SNL

In a final order issued Jan. 3, the Idaho Public Utilities Commission rejected the merger application filed by Spokane, Wash.-based Avista Corp.and Toronto-based Hydro One Ltd., citing a state law that appears to bar the transaction due to the Ontario government's control of Hydro One and a post-acquisition Avista.

Hydro One, Avista merger proceedings

Commission	Status
Federal Energy Regulatory Commission	Approval received Jan. 16, 2018
Regulatory Commission of Alaska	Approval received June 4, 2018
Idaho Public Utilities Commission	Rejected Jan. 3, 2018
Montana Public Service Commission	Approved June 12, 2018; commission final order issued July 10, 2018
Oregon Public Utility Commission	Settlement filed May 25; awaiting decision
Washington Utilities and Transportation Commission	Rejected Dec. 5, 2018
Additional approvals	**Status**
Committee on Foreign Investment in the United States	Review completed May 21, 2018
Hart-Scott-Rodino Antitrust Improvements Act	Waiting period expired April 5, 2018
Avista shareholder approval	Approved Nov. 21, 2017

Data as of Jan. 3, 2019.
Source: Regulatory Research Associates, an offering of S&P Global Market Intelligence

"This Commission's statutory duty to consider whether the proposed merger would be just, fair, reasonable, in the public interest and otherwise in accordance with Idaho law and regulatory policy demands that we address the documented, contractual and ongoing control that the Province of Ontario exerts over Hydro One," the PUC said in its order, going on to quote portions of Section 61-327, which pertains to foreign acquisition of electric utility property. "We cannot approve the proposal if Avista's transfer to Hydro One amounts to a transfer to 'any organization acting as ... representative for, or in concert ... with, any such government ...;' or 'any company ... whose issued capital stock, or other evidence of ownership ... is owned or controlled, directly or indirectly, by any ... governmental or political unit.'"

Hydro One is an investor-owned utility, but the Province of Ontario is its largest shareholder, with 47% of outstanding shares. Additionally, the PUC said the Province "maintains unique governance agreements with Hydro One, granting it significant control and influence over the utility." That lack of independence is the primary reason for the rejection, the PUC said. In its order, the commission rejected both the companies application and a proposed amended settlement reached among certain parties to the proceeding in November 2018 that included additional ring-fencing provisions to protect the autonomy of Avista's management team post-merger.

In a statement issued after the PUC order on Jan. 3, the companies said they were disappointed in the decision. Avista and Hydro One said they are reviewing the order in detail and will determine the appropriate next steps.

Transaction approval background

The Idaho PUC is the second state regulatory body to outright reject the proposed $5.3 billion deal; the Washington Utilities and Transportation Commission denied the companies application in early December 2018, citing similar concerns regarding Avista's autonomy under ownership of Hydro One. Hydro One and Avista on Dec. 17, 2019, asked the WUTC to reconsider, arguing that the commission "misapprehended the political risks that the Province of Ontario's ownership stake in Hydro One poses to Avista and its customers" by failing to specifically identify exactly how the province's actions could impact Avista. The WUTC has not yet responded to their request.

With one state left to issue a decision on the deal — Oregon — its prospects for consummation have slimmed. In Oregon, the Oregon Public Utility Commission has no statutory deadline to render a decision and the commission has not provided guidance regarding when it will do so, but the case has been fully submitted. An administrative law judge in the Oregon proceeding said in December that the PUC was reviewing the WUTC's decision "to determine its procedural impact on the proceedings in Oregon."

The companies first announced their proposed transaction in July 2017 and applied for approval in five states. Regulators in Alaska and Montana issued approval prior to an executive shakeup at Hydro One, initiated by the Ontario government that delayed the process in Idaho, Oregon and Washington and exacerbated concerns about the political risks stemming from the Province.

Hydro One and Avista had originally expected to the deal to close by the end of 2018. In September 2018, the companies extended their initial deadline on the transaction from Sept. 30, 2018, to March 30, 2019.

Forecasters Predict Below-Normal Runoff in Oregon, Snake River, K.C. Mehaffey – Clearing Up

Forecasters say this year's April through September water supply could be well below normal, factoring in current conditions, precipitation forecasts over the next 10 days and the likelihood that El Nino will influence weather over the next three months.

But predictions in a Jan. 3 briefing by NOAA's Northwest River Forecast Center also point to near-normal runoff in the upper Columbia River basin, and above normal runoff in the Canadian portions of the basin.

The webinar was the first water supply forecast for 2019, with monthly predictions to continue through June.

"Many of the mid- and lower-Snake tributaries are well below normal," said Forecast Center senior hydrologist Kevin Berghoff, showing the forecast for this year's water supply. "The

upper Snake is looking reasonably OK at this point-somewhere in the 85- to 90-percent range-but many of the mid- and lower-Snake tributaries are dropping down below the 75-percent range," he said.

Part of the problem is a poor start to snowpack this winter. Washington State Department of Ecology Director Maia Bellon said in a Dec. 31 tweet, that after suffering one of the slowest starts to the snowpack in 30 years, snowpack jumped to 94 percent of normal thanks to recent storms. But Oregon and parts of the Snake River basin haven't been as snow-fortunate.

"Oregon-while it's looking better than it did last year- it's still well below normal even after fairly decent snowpack accumulation over the last week," Berghoff rep01ted. Since Oct. 1, the upper Columbia and Snake river basins have seen below-normal precipitation, while Oregon has been well below normal. The snow water equivalent is also below normal across the upper Columbia and Snake river basins, and well below normal in the Oregon Cascades.

Berghoff said current three-month forecasts for January through March show an increased chance of below-normal precipitation throughout most of the Columbia Basin, although there's no clear signal for precipitation levels in the Snake River basin. In addition, he said, there's an increased chance for above-normal temperatures across the Columbia and Snake river basins "during the snow-building months."

Berghoff noted that's partly because there's still a 90-percent chance El Nino will form this winter and continue into spring. He said that although sea surface temperatures are warm enough for an El Nino to form, the atmosphere has not yet responded.

California Files Draft Environmental Impact Report for Klamath Project, K.C. Mehaffey – Clearing Up

The California State Water Resources Board released a draft report outlining environmental impacts of a proposal to remove three Klamath River dams in California, and is accepting public comment until Feb. 26.

The draft Environmental Impact Report identifies "significant and unavoidable" impacts in 14 areas, including aesthetics; air quality; aquatic resources; flood hydrology; geology, soils and mineral resources; hazards and hazardous materials; historical and tribal cultural resources; noise, phytoplankton and periphyton; public services; recreation; terrestrial resources; transportation and traffic; and water quality.

Six of those impacts, plus water supply and water rights, were also identified as significant but with mitigation measures that will prevent or avoid significant impacts. "Additionally, the State Water Board has identified cumulatively considerable effects of the Proposed Project," the board's letter announcing the release of its report states.

The analysis is part of California's process for issuing a final permit under Section 401 of the Clean Water Act for removing the dams. The Oregon Department of Environmental Quality has already issued its final water quality certification for removal of the J.C. Boyle Dam-a fourth dam in the proposal to restore the lower Klamath River to a free-flowing river.

Klamath River Renewal Corporation and PacifiCorp have filed joint applications with the Federal Energy Regulatory Commission to separate the four dams from PacifiCorp's license, transfer the license for those four dams to KRRC and surrender the license so that dam removal can begin.

In a news release, the KRRC applauded release of the document. "This draft report is a key step to completing this critical project and rehabilitating one of the great rivers of the American west. It's a sign of meaningful progress and I look forward to a thorough KRRC review of this report and its

proposals," Mark Bransom, KRRC's chief executive officer, said in a prepared statement.

The board will host public meetings and receive comments in Yreka, Arcata, Orleans and Sacramento from Feb. 5 through Feb. 15. Comments can also be sent to WR401Program@waterboards.ca.gov or Michelle Siebal, State Water Resources Control Board, Division of Water Rights - Water Quality Ce11ification Program, PO Box 2000, Sacramento, CA 95812-2000.

Washington Ratchets Up Vehicle GHG Standards to Match California's, Rick Adair – Clearing Up

An update to Washington state's vehicle emissions standard takes effect Jan. 27, requiring all new vehicles registered in the state to continue meeting California's standards.

Through at least 2025, California's standards progressively reduce the amount of greenhouse gases its cars and trucks are allowed to emit.

Washington's alignment with the California rules was cemented in 2005 by passage of the Clean Car Law, meant to reduce the state's biggest source of GHG emissions as well as other pollutants.

Twelve other states and the District of Columbia have also opted to adopt the California Air Resources Board's higher standards rather than national standards set by the EPA, under terms of the 1963 federal Clean Air Act.

And while California and the EPA reached an agreement in 2009 to align the state and national standards, the Trump administration has proposed weakening the national standards by freezing emission requirements beginning in 2021.

California, however, committed in September to continue reducing emissions, and Washington's Department of Ecology has adjusted its rules in step with California's, as state law requires, Washington Gov. Jay Inslee said in a release.

Rolling back the standards under the EPA proposal would increase Washington's annual GHG emissions by 1.8 million metric tons by 2035, Ecology said. Nationally, the rollback could mean an additional 500 million metric tons of carbon dioxide going into the atmosphere over the lifespan of the vehicles, the agency added.

The update to Washington's rules was filed in early November, and signed Dec. 27, before the end of the year, in order to take effect for model year 2021, Ecology spokesman Andrew Wineke said.

Study Finds Firm Capacity Essential for Deep Decarbonization in Northwest, Rick Adair – Clearing Up

A recent study says it's possible to maintain resource adequacy for a deeply decarbonized Northwest electricity grid, as long as sufficient firm capacity is available during periods of low wind, solar and hydro production.

The study, conducted by San Francisco-based E3 for a group of Northwest consumer and investor-owned utilities, is the first to do a deep dive into both the grid and cost implications of the region's move toward renewables.

"Our study is falling right in line with the emerging industry consensus that it is very difficult to serve all load during all possible conditions with just wind, storage and hydro," Ame Olson, a senior partner at E3, told Clearing Up.

Occasions when reliability might be challenged include extended wintertime cold snaps in the region, when wind tends to flag and sunlight is reduced, leading to high levels of unserved load by the third or fourth day, Olson said.

The study looked at how to maintain resource adequacy, both in the 2020-2030 time frame under growing loads and increasing coal retirements, and in the 2040-2050 time frame under stringent carbon abatement goals.

The study found that it would be "extremely costly and impractical" to replace all carbon-emitting firm generation capacity with solar, wind and storage, due to the very large quantities of these resources that would be required.

For a 100-percent greenhouse gas emissions reduction using only renewables, relative to 1990 levels, E3 found that beyond a 98-percent reduction the costs increased drastically and required massive renewables overbuild.

The marginal cost for the overbuild jumped from a range of \$310-\$700 per ton of CO2 at 98-percent reduction to the range of \$11,000-\$16,000 per ton at 100 percent, a result that "vastly exceeds" the societal cost of carbon and confirms using renewables only is "impractical," the study said.

Instead, the study found that natural gas generation is the most economic source of firm capacity, and that adding new gas capacity "is not inconsistent with deep reductions in carbon emissions."

Other possible low-carbon firm capacity solutions include new nuclear generation, gas or coal generation with carbon capture and sequestration, ultra-long duration electricity storage and replacing conventional natural gas with carbon-neutral gas, i.e. renewable natural gas (RNG).

E3 anticipates that the region will need new capacity in the near term in order to maintain an acceptable level of resource adequacy after the planned retirements of the Boardman, Centralia and Colstrip coal plants.

It also cautioned that reliance on market purchases to meet capacity needs could result in underinvestment of capacity resources. The study urged the establishment of a formal mechanism for sharing planning reserves on a regional basis, which it said "may help ensure sufficient physical firm capacity and reduce the quantity of capacity required to maintain resource adequacy. "

It also noted that investments in fuel delivery infrastructure may be required to ensure resource adequacy "even under a deep decarbonization trajectory. "

The study focused on long-run reliability, and built on previous E3 analyses. All of this work has been motivated by the significant changes expected in the region's generation resource mix over the next 30 years due to changing economics and more stringent policy goals.

The present study was commissioned by 13 Northwest utilities-Avista, Puget Sound Energy, NorthWestern Energy and the 10 consumer-owned utilities of the Public Generating Pool-to examine resource adequacy under a changing resource mix.

The Public Generating Pool members are Benton, Clark, Chelan, Cowlitz, Klickitat, Grant, Lewis and Snohomish county PUDs; Tacoma Power, and the Eugene Water and Electric Board.

Using separate financial and reliability models in tandem, the study developed least-cost resource portfolios with "robust" long-run reliability.

A system was deemed "resource adequate" if it had sufficient capacity to serve load across a broad range of weather conditions, subject to a long run standard for frequency of reliability events.

While there is no mandatory or voluntary national standard for RA-each balancing authority establishes its own standard subject to oversight by state commissions or locally elected

boards, E3 noted-the study adopted what it called the most common standard across the industry, a 1-in-10 standard of no more than one day of lost load in 10 years, or no more than 2.4 hours per year.

The study adopted the U.S. portion of the Northwest Power Pool (excluding Nevada)-which it called the "greater NW" region-as the model area, and assumed that any resource within it would serve any need throughout the area.

Balancing authority areas within the model include Avista; BPA; Idaho Power; NorthWestern Energy; PacifiCorp (east and west); Portland General Electric; Puget Sound Energy; Seattle City Light; Tacoma Power; Western Area Power Administration; and the Chelan, Douglas and Grant county PUDs.

For simplicity, the study assumed there were no transmission constraints or transactional "friction," and modeled the system as being more efficient and seamless than it actually is.

Also for simplicity, the study ranked portfolios by the aggregation of all costs and benefits within the study region. In reality, decarbonization costs will vary from utility to utility due to differences among them, such as levels of fossil-fuel resources.

In addition, individual systems will need a higher reserve margin than the modeled region, due to their smaller size and lower diversity. And the capacity contribution of renewables will be different for individual utilities due to differences in the timing of peak loads and renewable generation production.

Vlad Gutman-Britten, Climate Solutions' Washington director, told Clearing Up that while he has only been briefed on the E3 study, it aligns with the results of earlier studies the organization commissioned, including one conducted by E3 that focused on financial criteria and on what it would take to attain an 80-percent GHG emissions reduction. The new study adds a deeper view that includes modeling resource adequacy.

"One of the compelling findings [in the new E3 study] is the validation that deep decarbonization is feasible," Gutman-Britten said. "We found the cheapest pathway there is renewable natural gas, which isn't inconsistent with what they found."

Another compelling finding in both the new and old studies, he said, is the system benefit from low amounts of dispatchable firm generation.

These findings were bolstered by another recent E3 study released in December commissioned by NW Natural Gas, which the company says shows the "pivotal role" natural gas plays in helping Oregon and Washington meet emission reduction goals "affordably and reliably."

The NWN study also focused on the economic model, with an emphasis on demand during the coldest days.

It also considered renewably produced hydrogen or synthetic methane blended in the gas pipeline as options to displace fossil natural gas.

The study showed that by adding 25 percent RNG into the existing natural gas system and delivering it to heat homes directly rather than using it to generate electricity, the region can achieve its climate goals without a substantial build-out of new power plants.

"The good news is that we already have plans in place to put RNG into our pipeline system, which is one of the most modern in the nation," David Anderson, NWN CEO and president, said in a statement.

Rocky Mountain Power to sell 107-MW coal-fired plant in Montana, Selene Balasta - SNL

Private developer Rocky Mountain Power LLC filed an application with the Federal Energy Regulatory Commission, seeking approval to sell its 107-MW coal-fired Hardin power plant in Montana to a subsidiary of Big Horn Datapower Holdings LLC.

The Hardin facility was built in 2006 and is interconnected to the transmission system owned and operated by NorthWestern Corp., which does business in Montana as NorthWestern Energy.

Rocky Mountain Power has been seeking to sell or close the money-losing plant because of the decline in the market price of electricity. NorthWestern, which was among the potential buyers, in January 2018 decided against buying the struggling facility.

According to the FERC application, Big Horn Datapower Holdings is owned by a private individual. Rocky Mountain Power is owned by Heorot Power Holdings LLC, which in turn is owned 88.57% by investment funds managed or advised by GSO Capital Partners LP.

The commission is requested to approve the transaction by Feb. 4 *(FERC docket EC19-41)*

Momentum on PURPA reform may slow in new US Congress, Molly Christian

Efforts to update an over 40-year-old law requiring electric utilities to buy power from small renewable energy facilities may hit resistance in the new U.S. Congress that kicked off in early January.

Critics of the Public Utility Regulatory Policies Act of 1978, known as PURPA, want Congress to change the law to prevent alleged gaming by project developers and make larger new renewable plants more competitive. Those complaints spurred hearings and GOP-backed proposals last Congress that sought to ease PURPA's mandatory power purchase obligations.

But Democrats' takeover of the U.S. House of Representatives in the 2018 midterm elections could dim prospects for reform.

A bill last Congress from U.S. Rep. Tim Walberg, R-Mich., dubbed the PURPA Modernization Act of 2017, sought to restrict the size of renewable energy facilities from which utilities are obligated to buy power. Currently, renewable generators must have 80 MW or less of capacity to qualify as a PURPA facility. In addition, facilities with less than 20 MW of capacity are presumed to lack the non-discriminatory access to wholesale markets needed for their host utilities to terminate their mandatory purchase obligation under the law.

To ease those obligations, Walberg's bill would lower the 20-MW rebuttable presumption threshold to 2.5 MW or less. The legislation also would require the Federal Energy Regulatory Commission to alter its rule defining what facilities qualify as separate plants under PURPA.

For the purpose of determining PURPA eligibility, FERC considers multiple small power production units to be a single facility only if they are located within one mile of each other, share the same energy resource, and are owned by one company or by affiliates. Walberg's bill would convert FERC's one-mile rule to a rebuttable presumption, thereby allowing stakeholders to challenge developers they believe are abusing the law by breaking a large project into several smaller ones in order to qualify as PURPA facilities.

Despite support for the bill from some lawmakers and large utilities, the House Energy and Commerce Committee never voted on the measure last Congress and looks less likely to do so in the 116th Congress that began on Jan. 3, given that the

panel's incoming chairman previously opposed the legislation.

U.S. Rep. Frank Pallone Jr., D-N.J., who became the Energy and Commerce Committee chairman after Democrats reclaimed the House, calledWalberg's bill a "direct assault on PURPA," a law he said has saved consumers money while expanding the generation of cleaner electricity. In addition, Pallone and other House Democrats want to focus more in the new Congress on climate change and oversight of the Trump administration's efforts to roll back environmental regulations from the energy sector, priorities that could eclipse PURPA updates.

Nevertheless, Walberg plans to reintroduce his bill in the new Congress and expects a companion proposal from the U.S. Senate, Walberg spokesperson Dan Kotman said. The legislation will be a "slightly modified version" of the bill from last Congress, according to Kotman, who did not provide further details on possible changes.

U.S. Sen. John Barrasso, R-Wyo., introduced a companion bill to the PURPA Modernization Act in April 2018, but the Senate Energy and Natural Resources Committee did not vote on the legislation in the prior Congress.

FERC STILL MAY ACT

Proponents of PURPA reform say FERC can make some changes to the law on its own, including with respect to how states calculate the avoided cost of buying power from PURPA facilities rather than building new generation or procuring electricity from other sources — a key figure in setting rates for PURPA plants.

Although commission members have emphasized that Congress must make any big revisions to the law, possible updates to PURPA are among FERC's priorities for the new year. In December 2018, FERC Chairman Neil Chatterjee said one of the agency's main initiatives in 2019 will be "better aligning PURPA with our modern energy landscape."

But that work will compete with other priorities. Chatterjee said FERC also wants to focus in 2019 on its ongoing grid resilience proceeding, pipeline policy statement review, transmission incentive policies, formation of a final rule on how distributed energy resources can participate in wholesale markets, and potential changes to the commission's Order 1000 transmission planning mandate. The recent passing of FERC commissioner Kevin McIntyre also could slow work at the agency, as the commission now is split between two Republican and two Democratic members.

elly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Kelly Francone <kfrancone@energystrat.com>
Sent time: 01/29/2019 01:24:48 PM
To: Tony Hardenbrook
Cc: Jeff Burks <jburks@energystrat.com>
Subject: AWEC Energy Data Request
Attachments: 190128 Input Data Verification Sheets - University of OR.xlsx Carbon Cost Profile - AWEC CEC Low-High No Allow Alloc.pdf

---

Dear Tony,

Energy Strategies has created a spreadsheet tool to estimate the direct and indirect cost to AWEC member facilities due to Oregon's proposed cap and trade regulation. The tool will estimate a facility's cost to purchase allowances if its emissions exceed 25,000 metric tons of $CO2_e$ and it is listed as a covered facility. (Our model currently projects 13 AWEC member facilities will be covered under the proposed cap and trade legislation.) The model will also calculate the potential cost exposure AWEC member facilities face due to increases in the cost of electricity and natural gas due to the costs of assigned to CO2e emissions associated with electricity and natural gas supplies. An example of the type of summary cost information we can provide each AWEC member and each facility is attached.

A critical component of the model is a database that includes information on over 95 AWEC member facilities in Oregon. Data includes company name, facility name, location by city and county, Primary 6-digit NAICS code identifier, electricity consumption (kWh), electricity service provider, and natural gas consumption (MMBtu). Company and plant name, location, and primary NAICS code information were compiled from public information included in EPA's ECHO 2017 data base https://echo.epa.gov/ and ODEQ's GHG Reporting program. Electricity consumption data was compiled from member responses to ICNU's 2015 Electricity Survey and natural gas consumption data was obtained from AWEC members 2016 reports filed with the ODEQ's GHG Reporting program.

The model's estimate of member facilities direct and indirect compliance costs is only as accurate as the information in the data base. A spreadsheet with the information we currently have for your Oregon facilities is attached. Because the information is from different sources, covers different years and may be incomplete, we would like each AWEC company to review and verify the plant information in the attached spreadsheet file and make corrections as necessary, add facilities that we may have missed and update the electricity and natural gas consumption with 2017 data.

Please use the attached spreadsheet to update your company's facilities data. **Also, please provide the period of time the data represents by including that in the title you save your spreadsheet under (e.g. 2017 Energy Usage for "company").**

We would like to have this information as soon as possible. We expect the cap and trade legislation to be released this week and would like to be able to provide AWEC members a timely assessment of the cost exposure their facilities potentially face to cap and trade legislation. If you have questions regarding the AWEC facilities data base, the cap and trade cost model, and this request please call Energy Strategy's project lead, Jeff Burks. He can be reached at 801-355-4365 or by email at jburks@energystrat.com

We appreciate your quick response!

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

Company:	University of Oregon
Additional Facilties:	0

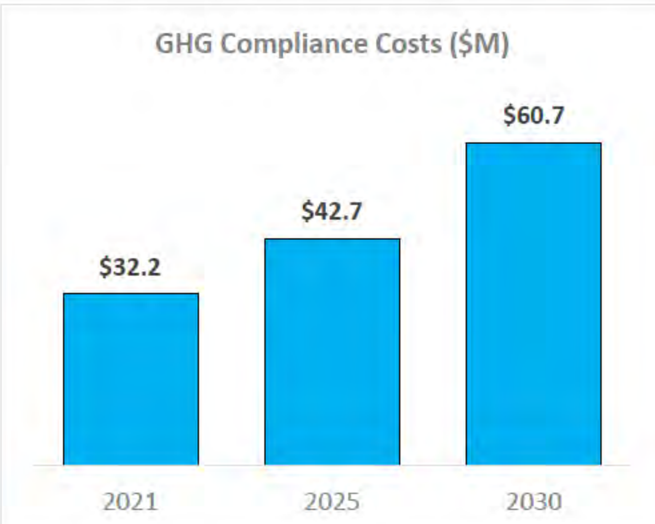
						Electricity Consumption			Natural Gas Consumption		
Additional Facility?	Company	Facility Name	County	City	Primary NAICS Code	Annual Use (kWh)	Reported Year	Service Provider	Annual Use (mmBtu)	Reported Year	Service Provider
Yes	University of Oregon	University of Oregon	Lane	Eugene	611310						
	University of Oregon	All Facilities				-			0		

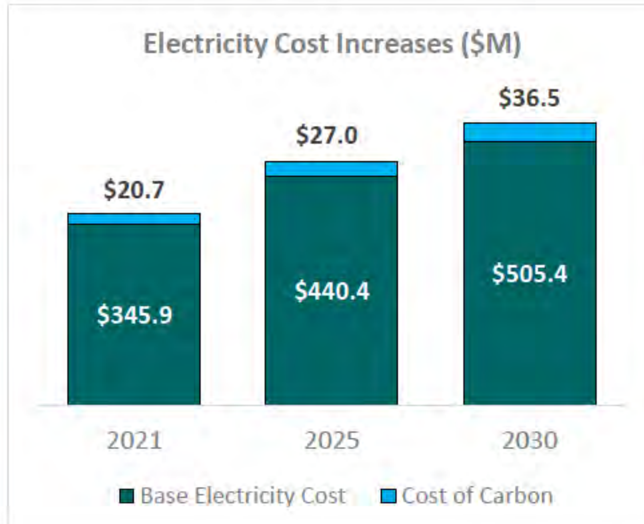
Alliance of Western Energy Consumers

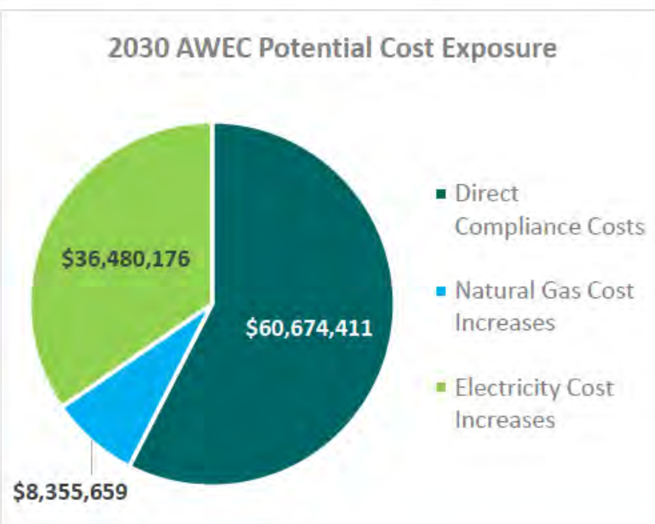
Oregon Cap and Trade Regulations

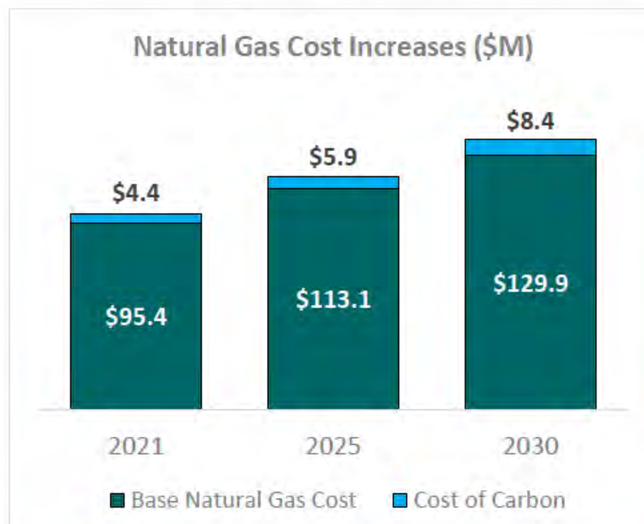
Regulatory and Energy Cost Impacts on AWEC

AWEC - CEC Low Carbon Price, No Allowance Allocation









Company Facilities	County	Industry Type	NAICS Code	GHG Emissions	GHG Compliance Requirement	EITE Eligible
74 Facilities				1,901,162		

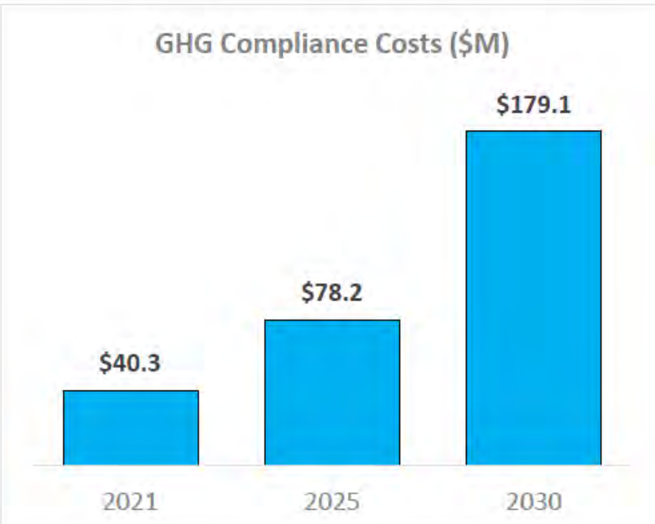
AWEC

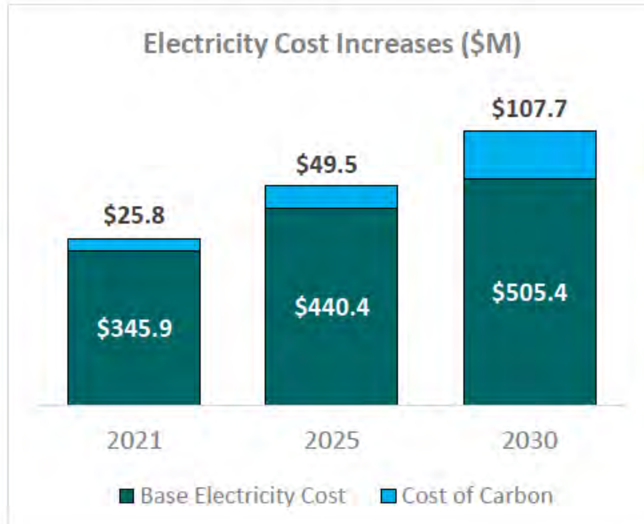
Alliance of Western Energy Consumers

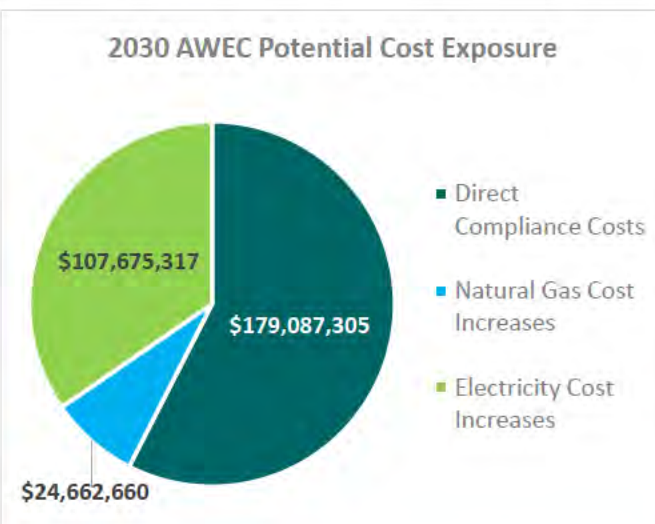
Oregon Cap and Trade Regulations

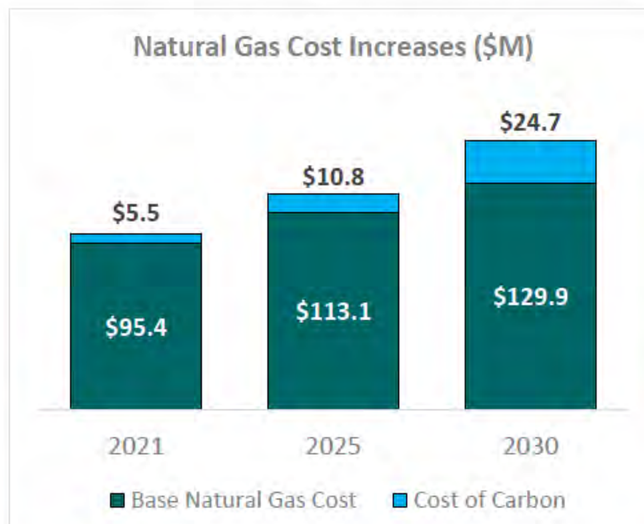
Regulatory and Energy Cost Impacts on AWEC

AWEC - CEC High Carbon Price, No Allowance Allocation









Company Facilities	County	Industry Type	NAICS Code	GHG Emissions	GHG Compliance Requirement	EITE Eligible
74 Facilities				1,901,162		

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 01/30/2019 02:12:18 PM

To: Aldis.Raisters@gapac.com; kwilson@legadv.com; kristin.b.marshall@boeing.com; lori@lorievans.us; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; mruckwardt@schn.com; mingon@ohsu.edu; todd.wiseman@solvay.com; tom@richlandpaper.com; Wes.Hill@gapac.com; mary.mccordic@shell.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Amy Beck <amy.beck2@boeing.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Brad Beavers <bbeavers@timberproducts.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@nippondynawave.com>; Bruce Martin <bruce.martin@westrock.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Charley Hathaway <charley.hathaway@nwpsllc.com>; Charley <[redacted]>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Courtney Smith <courtney.smith@shell.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Dan Coyne <dancoyne@coynenet.com>; David Barge <DABarge@marathonpetroleum.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Tobin <DavidTobin@boisepaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Fawn Barrie <fbarrie@legadv.com>; Gary Londo <gary.j.londo@boeing.com>; Graham Bailey <graham.bailey@nippondynawave.com>; Greg Vaughn <greg.vaughn@resolutefp com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Ponderay <JAMIN.SIMMONS@resolutefp.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Keith Warner <keith.c.warner@boeing.com>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Ma <Mark.Brown@teck.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.org>; Mark Nelson <pacounsel@pacounsel.rog>; Mark Steele <Mark.Steele@norpac.com>; Marty Sedler <marty.sedler@intel.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <mike.kuhn@westrock.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Kaiser, Nick <Nick.Kaiser@nippondynawave.com>; Pat Ealy <pat.ealy@akzonobel.com>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Pat Lydon <PLydon@lhs.org>; Pat Ortiz <pat.ortiz@westrock.com>; Paul Langley; Phil Pesek <Phil.Pesek@teck.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Samuel Liebelt <samuel.liebelt@westrock.com>; Sandi Swarthout <sswarthout@capconn.net>; Scott, Edgar <Edgar.Scott@kaiseraluminum.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <SRHawley@marathonpetroleum.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steven Castracane <steven.castracane@linde.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Yarborough <Tom.yarborough@weyerhaeuser.com>; Tony Hardenbrook; Tyler Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Bill Gilmore <billmg@penwool.com>; Chad Stokes <cstokes@cablehuston.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Jake Evans <Jake.evans@onsemi.com>; Jared Sommer <sommerj@byui.edu>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kyle Williams <williamsk@byui.edu>; Nick Avenetti <nick@perlite.com>; Phil Foss <phil.foss@onsemi.com>; Rick Stricker <rstricker@baf.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Sam Merrick <merricks@byui.edu>; Scott Kennedy <scott.kennedy@kaisertwd.com>; Sharon Andersen <Sharon.w.anderson@intel.com>; Steve O'Brien <sobrien@baf.com>; Tommy Brooks <tbrooks@cablehuston.com>; Chuck Gates [redacted] Nancy Holbrook <Nancy.Holbrook@bp.com>; Nancy Hollbrook <Nancy.Richardson@bp.com>; Robert Pierce <robert.pierce@shell.com>; Rusty Williams <williwk@bp.com>; Kelly Francone <kfrancone@energystrat.com>; Jeff Burks <jburks@energystrat.com>

Subject: AWEC January 2019 Newsletter

Attachments: AWEC January 2019 Newsletter.pdf

AWEC members,

Please find the Alliance of Western Energy Consumers' January 2019 newsletter attached. Please let me know if you have problems opening it.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

Alliance of Western Energy Consumers

Monthly Energy Update

EPA "Affordable Clean Energy Act" to Hike Emissions in Several States

Page 6

For information, contact AWEC at 971.544.7169

IN THIS ISSUE:

January 2019

Hydro One/Avista, Terminate Merger After WA Commissioners Reject It

Hydro One Ltd. and Avista Corp. on Jan. 23 said they have terminated their proposed merger after Washington and Idaho regulatory agencies rejected Hydro One's $5.3 billion acquisition of Avista.

As required by the merger agreement, Hydro One will pay Avista a $103 million termination fee as a result of the decision, the companies said in a joint press release.

Ontario utility Hydro One and Spokane, Wash.-headquartered Avista first announced their proposed combination in July 2017 and sought approval from regulators in five states. Regulators in Alaska and Montana issued approvals of the deal but a subsequent executive shakeup at Hydro One, initiated by Hydro One's biggest shareholder — the Ontario provincial government — delayed actions in Idaho, Oregon and Washington as regulators there questioned the influence the Ontario government might have over a combined company.

Citing these concerns, the Washington Utilities and Transportation Commission denied approval for the merger in a Dec. 5, 2018, order. The commission officially denied the companies' Dec. 17, 2018, requests for reconsideration and rehearing of the decision by taking no action within 20 days of the requests.

The Idaho Public Utilities Commission in a Jan. 3 order denied the merger, citing a state law that prohibits the transaction due to the Ontario provincial government's control of Hydro One. On Jan. 14, the Oregon Public Utility Commission suspended its docket.

"After careful consideration and analysis of the likelihood of achieving a timely reversal of those orders, the Boards of Directors of Hydro One and Avista each individually determined that termination of the merger agreement is the best course of action for the companies and their respective shareholders," the companies said in their joint announcement.

Hydro One and Avista originally expected the deal to close by the end of 2018 before extending the deadline from Sept. 30, 2018, to March 30, 2019. Hydro One offered $53 per share in cash for Avista shares, and would have assumed $1.85 billion in net debt.

The announcement of the termination came after stock markets closed Jan. 23.

FERC Agrees More Funding is Needed for Klamath Dam Removal

A top FERC official approved Klamath River Renewal Corp.'s request to develop a "Plan B" for additional funding in case the cost of removing four dams and restoring the lower Klamath River exceeds the $450 million committed to the project.

In a Jan. 23 letter to KRRC and PacifiCorp-which still holds the license and operates the four dams slated for removal-David Capka, Director of FERC ' s Division of Dam Safety and Inspections, accepted a proposal to revise KRRC's dam removal plan and its cost estimate, to be submitted to the agency by April 29.

The revisions will supplement KRRC's Definite Plan for removing the dams, a key part of its FERC application with PacifiCorp to transfer the license for four PacifiCorp dams on the lower Klamath River to KRRC, and to surrender that license for decommissioning. The dams are the J.C. Boyle in Oregon, and Copco No. 1, Copco No. 2 and Iron Gate dams in California.

The decision to revise the plan-which includes an analysis estimating project costs at $397.7 million- follows the recommendations made by an independent board of consultants.

The board was created at FERC's direction and is asked to assess the feasibility and costs of the project, along with KRRC's financial ability to complete it.

The consultants met in October and provided a report to FERC in November with two main recommendations- a "Plan B" for additional funding in case financing from a California bond and PacifiCorp surcharges are inadequate, and a new cost estimate to be prepared by KRRC's technical consultants.

The Renewal Corporation accepted those recommendations and offered its own comments in a Dec. 12, 2018, letter to FERC.

Capka, in response, provided comments to the consultants' recommendations, and raised another potential issue, indicating that KRRC cannot simply switch to a plan to partially remove the dam facilities if it discovers full removal will exceed costs.

In his letter, Capka notes that partial dam removal is examined in KRRC's definite plan, and that KRRC indicated it is "primarily for the purposes of environmental review."

However, KRRC's response to the consultant recommendations states that it has the option to "de-scope" the project by implementing a partial dam removal. " Please verify that the proposed action in the Definite Plan for Commission approval is full dam removal," Capka's letter states.

Overall, the independent board of consultants (BOC) found that KRRC's Definite Plan appropriately recognizes the project's requirements and vulnerabilities, and that the types of insurance policies and bonds are appropriate for a project of this type, size and duration.

[I]t is the BOC' s opinion that it is likely that there will be sufficient funding within the state cost cap," their November report to FERC said. "However, the information reviewed also indicates that there is a possibility of exceeding the state cost cap for both full removal and partial removal schemes."

Because of that possibility, the consultants found it "imperative" to plan for cost overruns that are not covered by insurance, bonds, indemnification or a guaranteed maximum price with the contractor.

The state cost cap involves three sources of funding to decommission and remove the dams and restore the lower Klamath River. Totaling $450 million, they include a $250 million California bond measure, $184 million in surcharges from PacifiCorp's Oregon customers and $16 million in surcharges from PacifiCorp' s California customers.

The consultants suggest that KRRC could seek agreements with the states "to obtain further contributions from rate payers or possibly co-licensing between the current Licensee and Transferee.

There may be other alternatives; however, leaving this aspect of the project underfunded

(Continued on Page 3)

(Continued from Page 2)

carries the risk of incomplete dam removal and incomplete restorative efforts which could result in public safety issues and adversely affect the future of similar river restoration schemes."

The consultants' report also found "major shortcomings" in the plan's cost estimate, including an 8 percent allowance for contractor overhead and profit margin that consultants believe is very low.

"A profit expectation in the order of 12 percent (or higher) would be more appropriate," and under some perspectives, a 20 percent margin for both corporate overhead and profit would be more accurate.

Their report also stated, "[A]ny unforeseen significant cost would not be covered by the proposed funding."

KRRC's response letter outlines several finance methods it plans to use to compensate for unforeseen costs.

A comprehensive insurance package will cover harm or damages to a third party; a surety bond in an amount equal to the value of the contract for removal will cover cost overruns or delays within the contractor's responsibility; KRRC will indemnify PacifiCorp and the states of Oregon and California against any damages from events such as a dam collapse, a major lawsuit by opponents or contaminated soils downstream, it says.

CAISO Issues Local Market-Power Mitigation Rules Proposal

The California ISO issued its draft final proposal for a series of enhancements to its market-power mitigation rules aimed at several issues that have developed, particularly for hydroelectric resources operating in the Western Energy Imbalance Market (EIM).

CAISO has been refining the proposal, which is of interest for hydro resources that have found themselves forced to sell energy at prices below their marginal costs because of bid-mitigation rules, as well as other issues. CAISO in September had posted for comment its issue paper and straw proposal for the initiative.

The draft final proposal issued Jan. 16 represents the latter stages in the process before its scheduled presentation to the CAISO Board of Governors in March for approval.

According to CAISO, market participants have expressed concern about two situations that can arise because of the grid operator's market-power mitigation process: "flow reversal" and "economic displacement."

"EIM participants have identified cases when mitigation results in the market dispatching their hydro resources at prices below their marginal costs and often in quantities greater than needed to resolve market power," CAISO said. Another concern for market participants in the CAISO balancing-authority area is recent real-time gas-price volatility.

The latest proposal's changes include prevention of economic displacement between mitigated balancing-authority areas; an update to the hydro resource default energy bid; and proposed changes to the reference-adjustment process recently developed in a separate proceeding on commitment cost and default energy bid enhancements.

The ISO proposed to update reasonableness thresholds based on same-day gas trading information and manual requests received from suppliers. CAISO also proposed to update the gas-price floor component of the hydro default energy bids within an applicable fuel region if those requests indicate the gas-price changes apply to an entire fuel region.

Comments on the proposal are due on Jan. 30, and it is due for review by the EIM Governing Body on March 12 and the CAISO Board of Governors on March 27-28.

Montana Lawmakers Consider Purchasing Colstrip

Montana lawmakers are considering a bill that would allow the state government to purchase the 2,094-MW Colstrip coal-fired plant in Rosebud County.

House Bill 203, titled the Montana Energy Security Act, was introduced by Rep. Rodney Garcia, R-Billings, and would allow Montana the option of issuing $500 million in revenue bonds to finance the purchase of the plant.

The bill would establish a publicly elected five-member commission with the authority to decide terms of an eventual purchase of Colstrip, according to *Montana Public Radio*, which reported that under state ownership, the plant's approximately 360 workers would retain their benefit plans.

Proponents of state ownership seek to secure the future of Colstrip, which is owned by Talen Energy Corp., the operator of the facility, Puget Sound Energy, Portland General Electric. Avista Corp, and Northwestern Corp.

Colstrip mainly sells its output into Oregon and Washington, states that are moving beyond coal-fired generation as climate concerns impact environmental and energy policies and obtaining electricity from gas-fired and renewable projects have become more economical options.

Legislators in neighboring Washington are considering proposals supported by Jay Inslee, the state's Democratic governor, which would eliminate all coal-fired generation in the state by 2025.

Two of Colstrip's four units, Units 1 and 2, are slated to close by 2020 in any event, but Units 3 and 4 will remain operational.

A 2013 lawsuit brought by the Sierra Club and the Montana Environmental Information Center under the Clean Air Act against Puget Sound and Talen, each of which own a 50% stake in Units 1 and 2, resulted in a 2016 settlement under which the owners agreed to close the units no later than July 1, 2022.

NW Index Prices	Jan 2019	Dec 2018	Jan 2018
PGE Malin	$4.26	$6.03	$2.58
Kern River	$4.44	$5.87	$2.55
Northwest Pipeline	$4.22	$3.23	$2.52
NYMEX Futures Settlement	$3.642	$4.715	$2.738

Units 1 and 2 came online in 1975 and 1976, respectively, and each have an output of approximately 307 MW. Units 3 and 4, which each have an output is approximately 740 MW each, came online in 1984 and 1986.

The governments of Colstrip, Mont., and Rosebud County, where the facility is located, are backing the bill, as is the Montana AFL-CIO.

The Montana Chamber of Commerce and the Montana Taxpayers Association, meanwhile, have joined the Montana Environmental Information Center in opposing the legislation, according to Montana Public Radio.

Wyoming Bill Attempts to Prevent PacifiCorp Coal Plant Shutdown

A bill in the Wyoming state legislature would block coal plant closures by requiring public utilities to make good faith efforts to sell them before retirement.

Amid low natural gas prices and increasing penetration of renewable energy, some Western policymakers are attempting to ease or manage the transition off coal. A bill in the Colorado General Assembly, for instance, would push utilities

(Continued on Page 5)

(Continued from Page 4)

to retire coal plants early with consumer-backed bonds, the proceeds of which would provide assistance for affected coal plant workers.

But coal is still a major driver of Wyoming's economy, by far the nation's largest producer of coal. Fearing job losses in their districts, a trio of Wyoming state lawmakers is attempting to stave off the retirement of coal plants with a bill that would give the Wyoming Public Service Commission new powers to regulate the retirement and sale of coal plants or units.

The bill is specifically designed to slow PacifiCorp's movement away from coal, Wilbert claimed.

The bill would limit the recovery of costs associated with electric generation built to replace retiring coal facilities, making it harder to replace coal with other forms of generation, while providing a regulated process for the sale of at-risk coal facilities. It would also exempt companies that purchase at-risk coal plants from regulation as public utilities.

The bill would also require utilities to make a "good faith effort" to sell coal facilities prior to retirement. Under the legislation, state regulators would determine what constitutes a good faith effort by examining whether a utility provided sufficient time prior to the facility's retirement for potential purchasers to evaluate the facility; whether the utility made reasonable efforts to market the plant to potential purchasers; and whether the utility reasonably evaluated purchase offers.

Connie Wilbert, director of the Wyoming chapter of the Sierra Club, said the law would result in higher utility rates for Wyoming ratepayers and scare off potential renewable energy developers.

“This is much bigger than Wyoming — this trend and the movement away from coal as a source of electricity in this country — and we just need to not be attracted by these short-sighted measures, which will not save the coal industry and would just create harm to the people of Wyoming," she said.

PacifiCorp in December 2018 released an analysis showing a net benefit of retiring 13 of 22 coal units by 2022. And a June, 2018 Sierra Club study concluded that 11 of PacifiCorp's 22 coal units, representing 2,730 megawatts of power, "are consistently higher cost than replacement energy options, and in many cases substantially so."

The company last year announced four new wind projects in Wyoming as a part of a plan to expand its wind-energy output. The four projects would add roughly 1,300 MW of wind energy to power 450,000 homes at a cost of $1.5 billion, the company said in a 2018 news release.

David Eskelsen, spokesman for Rocky Mountain Power, said in a statement that the company is just beginning its review of the legislation.

"Wyoming SF 159 brings up some very complicated issues at the core of providing reliable and affordable electric service for our customers," he said.

NATIONAL NEWS

EPA “Affordable Clean Energy Act” to Hike Emissions in Several States

Although it may drive a slight decline in the nation's overall carbon dioxide emissions in the next decade, the U.S. Environmental Protection Agency's proposed Affordable Clean Energy, or ACE, rule will raise the output of carbon and/or criteria pollutants in roughly 20 states, a new study found.

Further out, the rule even could cause U.S. power sector CO_2 emissions to exceed levels that otherwise would occur with no policy in place, according to a new analysis published Jan. 15 by Environmental Research Letters.

The ACE rule seeks to improve the efficiency of existing U.S. coal-fired power plants, but the heat rate improvements upon which it is based could prompt more coal units to operate or some plants to run more frequently, the analysis said.

That could cause a "rebound effect" that ultimately could increase carbon output in many states compared with no rule, said the report, which was put together by researchers with Resources for the Future, the Harvard T.H. Chan School of Public Health, and other universities and organizations.

Despite achieving a modest reduction in nationwide power sector CO_2 emissions, the ACE rule could increase carbon output in 2030 by up to 8.7% in 18 states plus the District of Columbia compared to no policy, the study found. States that could see increases include California, Texas, New York and many southeastern coastal states, including Florida.

The study also found that the ACE rule could increase SO_2 emissions in 18 states and raise NO_x output in 20 states plus D.C. in 2030 compared with no rule.

By 2050, the analysis suggested, national CO_2 emissions under the ACE rule would exceed emissions that would occur without any policy under two out of three heat-rate improvement scenarios as a result of plants potentially delaying retirement because their operations costs will be lower.

Under the third scenario, which assumes existing coal plants achieve a uniform 4.5% heat rate improvement at a cost of $100/kW, emissions under the ACE rule could be lower than without any policy in place, but achieving that efficiency target would be difficult, the report said.

To reach their conclusions, report authors used results from the EPA's own power sector model for the ACE rule. They also compared their findings to additional EPA ACE scenarios and modeling results for similar policies.

"Our findings demonstrate the importance of considering the emissions rebound effect and sub-national emissions impacts in evaluating the ACE and similar policies targeting heat rate improvements," the study said.

The ACE rule is intended to replace the Obama administration's Clean Power Plan, which established state-specific carbon emissions rate limits for all existing fossil fuel-fired plants. The Trump administration has proposed to repeal the Clean Power Plan, which the U.S. Supreme Court placed on hold in February 2016 pending the outcome of lawsuits against the regulation.

The study published in Environmental Research Letters said carbon emissions under the Clean Power Plan would have been lower through 2050 than with the ACE rule. But the EPA defended its proposed new rule, which it said would reduce U.S. greenhouse gas emissions 34% from 2005 levels when fully implemented.

"[The Clean Power Plan] did not result in any reduction in CO_2 because it was legally problematic and stayed by the U.S. Supreme Court," agency spokesman John Konkus said. "ACE, on the other hand, would continue to reduce emissions across the nation."

The ACE rule would allow states to make their own plans for lowering greenhouse gases.

(Continued on Page 7)

(Continued from Page 6)

The ACE rule would allow states to make their own plans for lowering greenhouse gas emissions from existing coal-fired plants.

The EPA's proposed "best system of emission reduction" for those sources would be heat-rate improvements that can be achieved through a range of "candidate technologies," including steam turbine upgrades and computer modeling to optimize emissions control technologies. Once the ACE rule is finalized, states would have three years to form their implementation plans.

By contrast, the Clean Power Plan would allow states to hit their specific emissions rate targets through several "building blocks," including shifting generation to lower-emitting plants such as those running on natural gas or renewable energy.

EIA Report Shows Renewables/Natural Gas Generating 70% of US Power by 2050

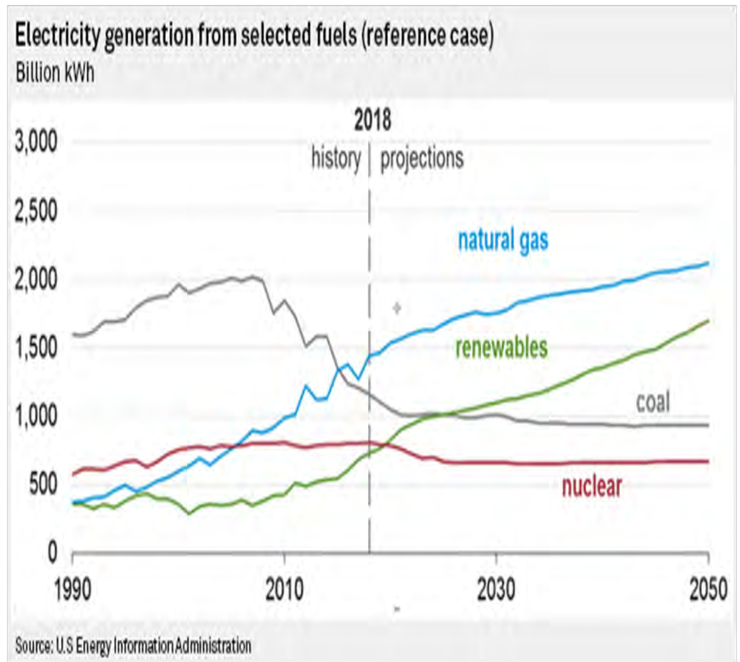
With plant retirements expected to drive a 20% cut in US coal production by 2035, the Energy Information Administration (EIA) newly released Annual Energy Outlook 2019 report projects natural gas and renewables will generate approximately 70% of the United States' electricity by 2050 due to low natural gas prices and declining capital costs for renewables.

Natural gas and renewables during 2018 generated about 52% of the country's electricity.

The report's baseline projections, or reference case, assumes no major changes in current laws, regulations, market trends and technology, and a 1.9% average annual growth in real gross domestic product. It further assumes that natural gas prices will remain below $4 per million British thermal units through 2035 and $5 per million Btu thereafter through 2050.

"The effect of abundant, generally low-priced natural gas is really evident in the power sector," EIA Administrator Linda Capuano on Jan. 24 said in releasing the agency's annual outlook at the Bipartisan Policy Center in Washington, D.C.

As a result, the outlook has natural gas' share of the U.S. generation mix growing from 34% in 2018 to 39% in 2050. It also projects renewables overtaking nuclear in terms of power production in 2020, the same year the U.S. is on target to become a net energy exporter thanks to substantial domestic production of oil, natural gas and liquefied natural gas.



Renewables' share, including hydropower, of U.S. power production is projected to increase from 18% in 2018 to 31% in 2050, driven largely by growth in wind and solar generation. In contrast, EIA expects the share of U.S. power production by nuclear energy is expected to fall from 19% in 2018 to 12% in 2050, and coal-fired generation's share to drop from 28% in 2018 to 17% by 2050.

“Initially supported by various tax incentives that are phased out through the '20s, renewable generation continues to grow as capital costs continue to decline and this is important," emphasized Capuano. "As the incentives roll away, there is [still] cost advantages" for renewables.

In total, EIA expects 72 GW of combined

(Continued on Page 8)

(Continued from Page 7)

new wind and solar photovoltaic capacity will be installed between 2018 and 2021, before the expiration of tax credits.

"By 2020, renewable generation surpasses nuclear across all [studied] cases," said Capuano, who added most nuclear plant retirements (and coal plant retirements) will occur by 2025.

EIA's reference case foresees no new nuclear power plant additions other than the Alvin W. Vogtle Nuclear Plant's expansion, and America's total nuclear capacity to stabilize at around 80 GW through 2050 after falling from 99 GW in 2018. If natural gas, oil prices, and extraction costs continue to fall, however, EIA said additional nuclear retirements could continue until the fleet stabilizes at just under 60 GW after 2030.

The EIA outlook said increasing energy efficiency across end-use sectors will also keep U.S. energy consumption relatively flat, even as the U.S. economy continues to expand. However, Capuano said electricity prices will only decline by 1% annually, or between 9.7 to 11.6 cents/kilowatt-hour by 2050, as a 16% decline in generation costs, caused by the replacement of older, less efficient capacity, is offset by increases in transmission and distribution costs of 18% and 25%, respectively.

The replacement of aging infrastructure and needed additions of new capacity to accommodate the integration of intermittent renewables onto the power grid will be blamed for those transmission and distribution costs, Capuano predicted.

Regarding efforts to combat climate change, the EIA outlook forecast that with no changes to current policy power sector-related carbon dioxide emissions will only fall by 0.3% from 1,741 million metric tons of CO_2 in 2018 to 1,587 million $MTCO_2$ by 2050.

During a panel discussion following the report's release, former Federal Energy Regulatory Commission member Colette Honorable said the outlook pulled no surprises but confirmed her thinking on a number of issues, including the importance of fuel and resource diversity and the need for natural gas resources in accommodating the slated "onslaught" of intermittent renewables.

DOE Provides $38 Million to Boost Coal-Fired Plant Performance

The U.S. Department of Energy earmarked $38 million in research and development funding for research that would improve the performance of existing coal-fired power plants, with the aim of helping to produce a more efficient "coal-fired plant of the future."

The DOE's Office of Fossil Energy announced Jan. 23 it will offer up to $38 million in federal funding for cost-shared R&D projects aimed at developing technologies that improve the overall performance, reliability and flexibility of America's coal-fired power plants.

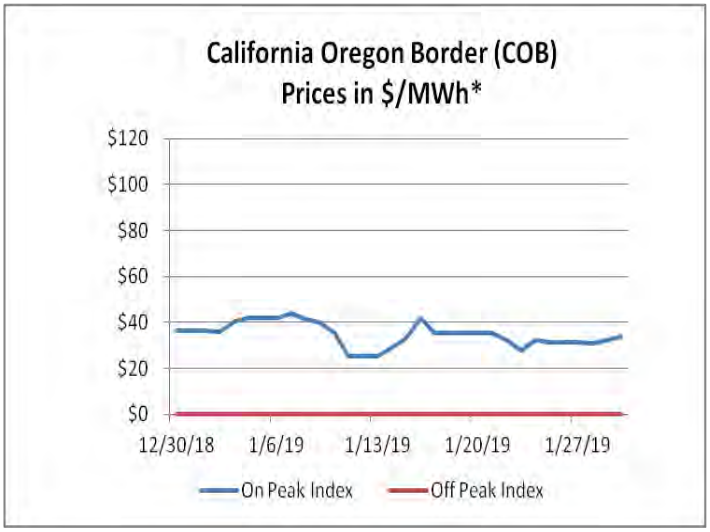
The move is in line with attempts by President Donald Trump to throw a lifeline to the struggling coal industry and stave off retirements of the nation's coal-fired generation fleet, which supplies about 30% of U.S. electricity.

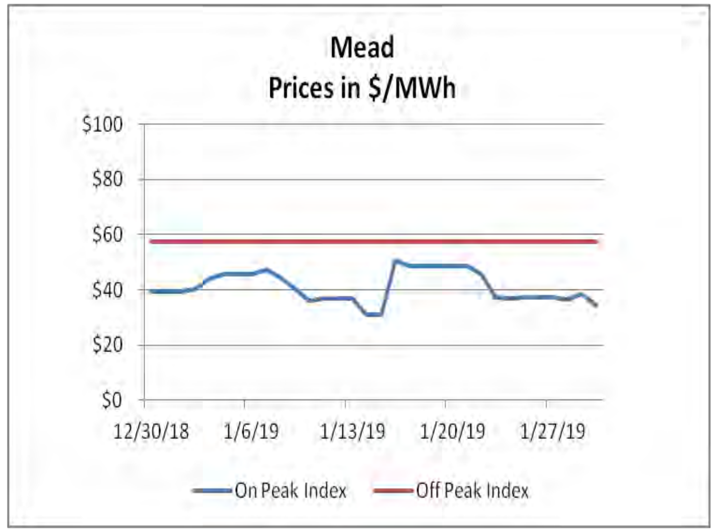
"Utilizing all of our energy resources to ensure the reliability and resiliency of our nation's electricity is a top priority for the Department of Energy," Energy Under Secretary Mark Menezes said in a news release. "Modernizing and advancing the existing coal fleet is imperative to this mission. By improving the efficiency of our baseload generation, we are strengthening the reliability of all our electricity generation."

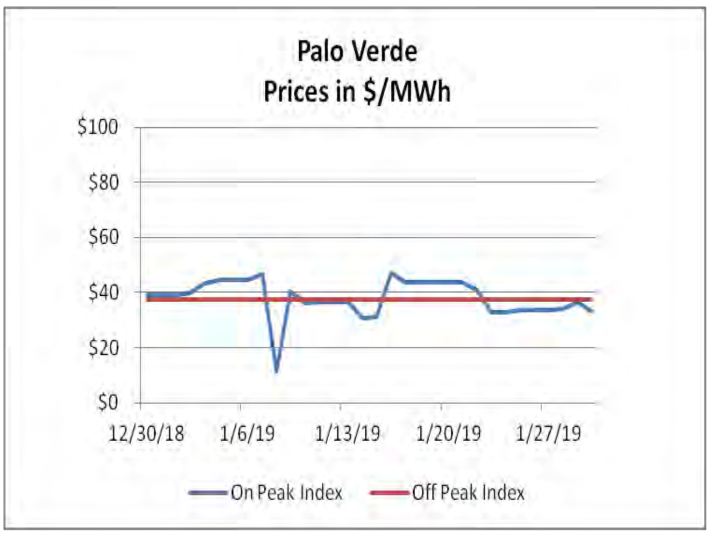
The DOE said the R&D-funded projects will support the agency's Transformative Power Generation Program and Crosscutting Research Program and advance its efforts to create "the coal-fired plant of the future" as part of the Coal FIRST (Flexible, Innovative, Resilient, Small, Transformative) initiative, a DOE program announced in December 2018.

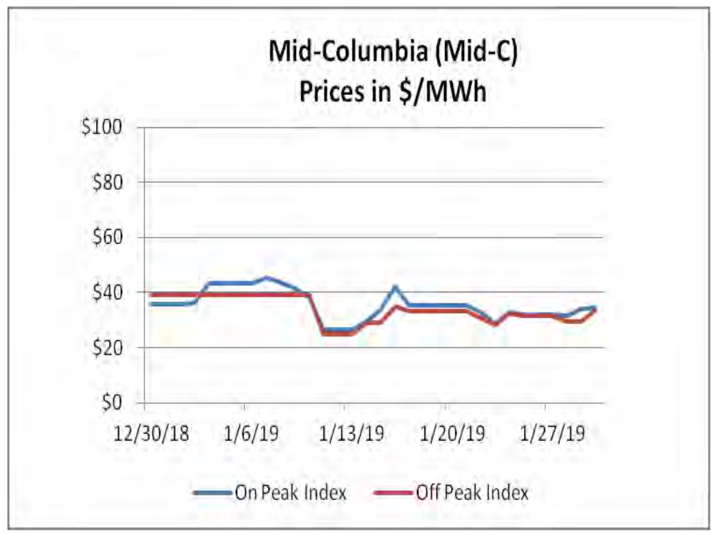
"Modernizing the existing coal-fired fleet is critical to our effort to allow existing coal plants to load, follow and operate more efficiently," Assistant Secretary for Fossil Energy Steven Winberg said. "This research and development will lower emissions and foster new technologies beneficial to our electric grid."

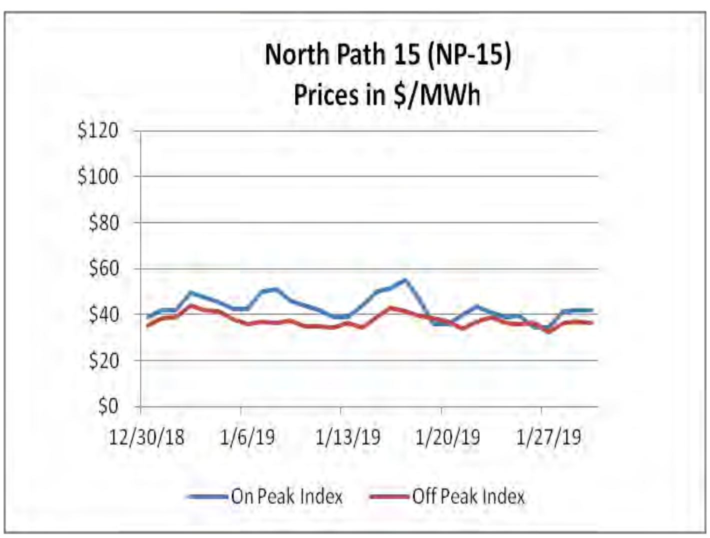
Western Electricity Market Prices

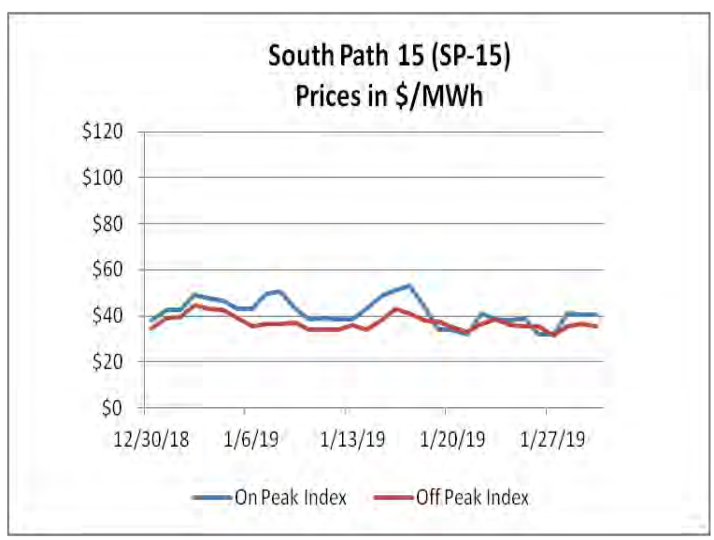












* COB off-peak prices unavailable

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 01/31/2019 01:54:37 PM

To: Aldis.Raisters@gapac.com; kwilson@legadv.com; kristin.b.marshall@boeing.com; lori@lorievans.us; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; mruckwardt@schn.com; mingon@ohsu.edu; todd.wiseman@solvay.com; tom@richlandpaper.com; Wes.Hill@gapac.com; mary.mccordic@shell.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Amy Beck <amy.beck2@boeing.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Brad Beavers <bbeavers@timberproducts.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@nippondynawave.com>; Bruce Martin <bruce.martin@westrock.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Charley Hathaway <charley.hathaway@nwpsllc.com>; Charley <[redacted]>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Courtney Smith <courtney.smith@shell.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Dan Coyne <dancoyne@coynenet.com>; David Barge <DABarge@marathonpetroleum.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Tobin <DavidTobin@boisepaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Fawn Barrie <fbarrie@legadv.com>; Gary Londo <gary.j.londo@boeing.com>; Graham Bailey <graham.bailey@nippondynawave.com>; Greg Vaughn <greg.vaughn@resolutefp com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Ponderay <JAMIN.SIMMONS@resolutefp.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Keith Warner <keith.c.warner@boeing.com>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Ma <Mark.Brown@teck.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.rog>; Mark Steele <Mark.Steele@norpac.com>; Marty Sedler <marty.sedler@intel.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@rocktenn.com>; Michael Kuhn <mike.kuhn@westrock.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Kaiser, Nick <Nick.Kaiser@nippondynawave.com>; Pat Ealy <pat.ealy@akzonobel.com>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Pat Lydon <PLydon@lhs.org>; Pat Ortiz <pat.ortiz@westrock.com>; Paul Langley; Phil Pesek <Phil.Pesek@teck.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Samuel Liebelt <samuel.liebelt@westrock.com>; Sandi Swarthout <sswarthout@capconn.net>; Scott, Edgar <Edgar.Scott@kaiseraluminum.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <SRHawley@marathonpetroleum.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steven Castracane <steven.castracane@linde.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Yarborough <Tom.yarborough@weyerhaeuser.com>; Tony Hardenbrook; Tyler Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Bill Gilmore <billmg@penwool.com>; Chad Stokes <cstokes@cablehuston.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Jake Evans <Jake.evans@onsemi.com>; Jared Sommer <sommerj@byui.edu>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kyle Williams <williamsk@byui.edu>; Nick Avenetti <nick@perlite.com>; Phil Foss <phil.foss@onsemi.com>; Rick Stricker <rstricker@baf.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Sam Merrick <merricks@byui.edu>; Scott Kennedy <scott.kennedy@kaisertwd.com>; Sharon Andersen <Sharon.w.anderson@intel.com>; Steve O'Brien <sobrien@baf.com>; Tommy Brooks <tbrooks@cablehuston.com>; Chuck Gates <[redacted]; Nancy Holbrook <Nancy.Holbrook@bp.com>; Nancy Hollbrook <Nancy.Richardson@bp.com>; Robert Pierce <robert.pierce@shell.com>; Rusty Williams <williwk@bp.com>

Subject: AWEC Member Update on the Northwest Pipeline Situation

Attachments: Northwest Pipeline Update 1-31-19.pdf

AWEC members,

Please see the attached update on the pipeline issue that occurred in the last quarter of 2018.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

M E M O R A N D U M

TO: John Carr, Executive Director, Alliance of Western Energy Consumers
Ed Finklea, Director of Natural Gas, Alliance of Western Energy Consumers

FROM: Chad M. Stokes

DATE: January 31, 2019

RE: Northwest Pipeline Update

Northwest Pipeline has issued the following notices, and continues to stress that the pipeline reserves the right to cut secondary gas to protect the operational integrity of the pipeline, which includes cutting secondary gas at any compressor in a constrained corridor, moving balancing gas to and from Clay Basin and Jackson Prairie, or to minimize operational flow orders for primary firm shippers.

1. **Stage III Entitlement.**

Due to forecasted colder than normal weather, Northwest Pipeline is declaring a Stage III (13%) Overrun Entitlement for all Receiving Parties north of the Kemmerer compressor station beginning gas day Saturday, February 02, 2019 until further notice.

2. Transportation Fuel Rate Increase.

Pursuant to Notice # 19-007, Northwest Pipeline will be adjusting the transportation fuel rate from 1% to 1.61% for TF-1, TF-2, TI-1 and DEX-1 rate schedules effective February 1st. The emergency fuel filing waiver request is subject to FERC approval which is expected the week of February 4th. Please consider the updated fuel factor as you prepare for February 1st business.

3. Rangely Operational Flow Order and Notice of Recall

Effective gas day January 24, 2019 and until further notice, Northwest Pipeline is issuing an OFO Recall Advisory and Operational Flow Order (OFO) northbound through the Rangely compressor station pursuant to Section 14.15(d) of its Tariff.

Under the OFO Recall Advisory, Shippers are required to: (1) recall capacity that is subject to an OFO recall provision; or (2) take other action that is acceptable to Northwest, to satisfy its OFO obligation.

If the scheduled quantities for gas day January 24, 2019 exceed the operational available capacities through the Rangely compressor, Northwest will provide Shippers with their specific OFO obligations by 4:00 p.m. MST on January 23. Shippers must comply with the OFO obligations no later than the Evening nomination deadline (5:00 p.m. MST).

4. Solicitation for Bids For Firm Mainline Transportation Capacity

Northwest Pipeline has posted package(s) of available firm TF-1 Large Customer transportation capacity to its Electronic Bulletin Board ("EBB") for competitive bid pursuant to the "Available Capacity" provisions of Northwest's Tariff. See the Northwest Pipeline website for more details at www.northwest.williams.com.

From:	Kelly Francone <kfrancone@energystrat.com>
Sent time:	02/03/2019 08:04:59 AM
To:	Tony Hardenbrook
Cc:	jburks@energystrat.com
Subject:	Re: AWEC Energy Data Request

Thanks Tony

Kelly Francone
Sent from my iPhone

On Feb 3, 2019, at 8:40 AM, Tony Hardenbrook <aharden2@uoregon.edu> wrote:

Sorry for the delay.

We have several different accounts for gas and electricity at University of Oregon. I hope to see estimates for each account, the key one being our Central utility plant.

Attached is the information requested.

Thanks!

R/
Tony
Tony Hardenbrook
Director of Utilities and Energy
Campus Planning and Facilities Management
University of Oregon
aharden2@uoregon.edu
541-346-9007

Safety * Continuity * Efficiency

From: Kelly Francone <kfrancone@energystrat.com>
Sent: Tuesday, January 29, 2019 1:25 PM
To: Tony Hardenbrook <aharden2@uoregon.edu>
Cc: Jeff Burks <jburks@energystrat.com>
Subject: AWEC Energy Data Request

Dear Tony,

Energy Strategies has created a spreadsheet tool to estimate the direct and indirect cost to AWEC member facilities due to Oregon's proposed cap and trade regulation. The tool will estimate a facility's cost to purchase allowances if its emissions exceed 25,000 metric tons of $CO2_e$ and it is listed as a covered facility. (Our model currently projects 13 AWEC member facilities will be covered under the proposed cap and trade legislation.) The model will also calculate the potential cost exposure AWEC member facilities face due to increases in the cost of electricity and natural gas due to the costs of assigned to CO2e emissions associated with electricity and natural gas supplies. An example of the type of summary cost information we can provide each AWEC member and each facility is attached.

A critical component of the model is a database that includes information on over 95 AWEC member facilities in Oregon. Data includes company name, facility name, location by city and county, Primary 6-digit NAICS code identifier, electricity consumption (kWh), electricity service provider, and natural gas consumption (MMBtu). Company and plant name, location, and primary NAICS code information were compiled from public information included in EPA's ECHO 2017 data base https://echo.epa.gov/ and ODEQ's GHG Reporting program. Electricity consumption data was compiled from member responses to ICNU's 2015 Electricity Survey and natural gas consumption data was obtained from AWEC members 2016

reports filed with the ODEQ's GHG Reporting program.

The model's estimate of member facilities direct and indirect compliance costs is only as accurate as the information in the data base. A spreadsheet with the information we currently have for your Oregon facilities is attached.
Because the information is from different sources, covers different years and may be incomplete, we would like each AWEC company to review and verify the plant information in the attached spreadsheet file and make corrections as necessary, add facilities that we may have missed and update the electricity and natural gas consumption with 2017 data.

Please use the attached spreadsheet to update your company's facilities data. **Also, please provide the period of time the data represents by including that in the title you save your spreadsheet under (e.g. 2017 Energy Usage for "company").**

We would like to have this information as soon as possible. We expect the cap and trade legislation to be released this week and would like to be able to provide AWEC members a timely assessment of the cost exposure their facilities potentially face to cap and trade legislation. If you have questions regarding the AWEC facilities data base, the cap and trade cost model, and this request please call Energy Strategy's project lead, Jeff Burks. He can be reached at 801-355-4365 or by email at jburks@energystrat.com

We appreciate your quick response!

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

<AWEC UO FY18 Annual Utility Data.xlsx>

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 02/05/2019 07:45:42 AM

To: Aldis.Raisters@gapac.com; kwilson@legadv.com; kristin.b.marshall@boeing.com; lori@lorievans.us; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; mruckwardt@schn.com; mingon@ohsu.edu; todd.wiseman@solvay.com; tom@richlandpaper.com; Wes.Hill@gapac.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; mary.mccordic@shell.com; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Amy Beck <amy.beck2@boeing.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Brad Beavers <bbeavers@timberproducts.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@nippondynawave.com>; Bruce Martin <bruce.martin@westrock.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Charley Hathaway <charley.hathaway@nwpsllc.com>; Charley <charleyhathaway@hotmail.com>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Courtney Smith <courtney.smith@shell.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Dan Coyne <dancoyne@coynenet.com>; David Barge <DABarge@marathonpetroleum.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Tobin <DavidTobin@boisepaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Fawn Barrie <fbarrie@legadv.com>; Gary Londo <gary.j.londo@boeing.com>; Graham Bailey <graham.bailey@nippondynawave.com>; Greg Vaughn <greg.vaughn@resolutefp com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Ponderay <JAMIN.SIMMONS@resolutefp.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Keith Warner <keith.c.warner@boeing.com>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Ma <Mark.Brown@teck.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.rog>; Mark Steele <Mark.Steele@norpac.com>; Marty Sedler <marty.sedler@intel.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <mike.kuhn@westrock.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Kaiser, Nick <Nick.Kaiser@nippondynawave.com>; Pat Ealy <pat.ealy@akzonobel.com>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Pat Lydon <PLydon@lhs.org>; Pat Ortiz <pat.ortiz@westrock.com>; Paul Langley; Phil Pesek <Phil.Pesek@teck.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Samuel Liebelt <samuel.liebelt@westrock.com>; Sandi Swarthout <sswarthout@capconn.net>; Scott, Edgar <Edgar.Scott@kaiseraluminum.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <SRHawley@marathonpetroleum.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steven Castracane <steven.castracane@linde.com>; Thomas Rozwood <tom.rozwod@norpacpaper.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Yarborough <Tom.yarborough@weyerhaeuser.com>; Tony Hardenbrook; Tyler Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Chuck Gates [redacted]; Nancy Holbrook <Nancy.Holbrook@bp.com>; Nancy Hollbrook <Nancy.Richardson@bp.com>; Robert Pierce <robert.pierce@shell.com>; Rusty Williams <williwk@bp.com>; Bill Gilmore <billmg@penwool.com>; Chad Stokes <cstokes@cablehuston.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Jake Evans <Jake.evans@onsemi.com>; Jared Sommer <sommerj@byui.edu>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kyle Williams <williamsk@byui.edu>; Nick Avenetti <nick@perlite.com>; Phil Foss <phil.foss@onsemi.com>; Rick Stricker <rstricker@baf.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Sam Merrick <merricks@byui.edu>; Scott Kennedy <scott.kennedy@kaisertwd.com>; Sharon Andersen <Sharon.w.anderson@intel.com>; Steve O'Brien <sobrien@baf.com>; Tommy Brooks <tbrooks@cablehuston.com>

Subject: Northwest Pipeline Update

Attachments: Northwest Pipeline Update 2-4-19.docx

AWEC members,

Please see the attached natural gas update from our gas consultants at Cable Huston.

If you have questions please contact Ed Finklea or Chad Stokes at:

efinklea@awec.solutions

cstokes@cablehuston.com

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200

Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

CABLE HUSTON LLP

M E M O R A N D U M

TO:	John Carr, Executive Director, Alliance of Western Energy Consumers Ed Finklea, Director of Natural Gas, Alliance of Western Energy Consumers
FROM:	Chad M. Stokes
DATE:	February 4, 2019
RE:	Northwest Pipeline Update

Northwest Pipeline has issued the following updated Stage II entitlement notice, and continues to stress that the pipeline reserves the right to cut secondary gas to protect the operational integrity of the pipeline, which includes cutting secondary gas at any compressor in a constrained corridor, moving balancing gas to and from Clay Basin and Jackson Prairie, or to minimize operational flow orders for primary firm shippers.

1. **Stage II Entitlement (Notice # 19-016, Posted Feb. 4, 2019).**

Due to continued forecasted colder than normal weather and to maintain system integrity, Northwest Pipeline is changing the Stage III (13%) Overrun Entitlement for all Receiving Parties north of the Kemmerer compressor station to a Stage II (8%) Overrun Entitlement beginning gas day Wednesday, February 06, 2019 until further notice. This Stage II entitlement will likely be enforced by your local distribution company.

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 02/08/2019 03:16:39 PM

To: sorber@ohsu.edu; Noel.Mak@atimetals.com; kristin.b.marshall@boeing.com; Aldis.Raisters@gapac.com; mingon@ohsu.edu; kfraser@energystrat.com; David Elliot <davidelliott@boisebuilding.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Drew Gilpin <Drew.Gilpin@evrazna.com>; Gary Collison <GCollison@pccstructurals.com>; John Domingo <jdomingo@pccstructurals.com>; Kim Hughes <kim.hughes@weyerhaeuser.com>; Larry Brockmann <lbrockma@timberproducts.com>; Mary Catherine McAleer <marycatherine.mcaleer@weyerhaeuser.com>; Matt Ruckwardt <mruckwardt@schn.com>; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Culver <michael.culver@ipaper.com>; Nick Kaiser <Nick.Kaiser@nippondynawave.com>; Penny Machinski <pmach@wlinpco.com>; Phil Zirngibl <Pzirngi@gapac.com>; Ron Holton <ronh@sor.timberproducts.com>; Ron Holton <rholton@timberproducts.com>; Samantha Julian <Samanthaj@pacounsel.org>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wes Hill <Wes.Hill@gapac.com>; Tony Hardenbrook; Eric <Eric.Streicher@airgas.com>; Drew Bryck <drew.m.bryck@boeing.com>; Keith Warner <keith.c.warner@boeing.com>; Richard White <richard.a.white7@boeing.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Amy Beck <amy.beck2@boeing.com>; Gary Londo <gary.j.londo@boeing.com>; Chris Parker <chrisparker@utah.gov>; David Clemens <David.Clemens@darigold.com>; John Bob <John.Bob@am.dynonobel.com>; Michael Slattery <Michael.Slattery@evrazna.com>; Rob Freres <rtfreres@frereslumber.com>; Sedler, Marty <marty.sedler@intel.com>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Don Sturtevant <don.sturtevant@simplot.com>; Slagle, Trudy <Trudy.Slagle@lambweston.com>; Lydon, Pat :LSO Supply Chain Management <PLydon@lhs.org>; Steven Castracane <steven.castracane@linde.com>; Mark Steele <Mark.Steele@norpac.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Phil Foss <phil.foss@onsemi.com>; Eric Fuller <efuller@precastcorp.com>; Bill Gilmore <billmg@penwool.com>; Marcie Peters <marcie.peters@solvay.com>; Nick Avenetti <nick@perlite.com>; Sarah Schack <sschack@timberproducts.com>; Daryll Fuentes <dfuentes@usg.com>; Bruce Martin <bruce.martin@westrock.com>; Bruce Wittmann <wittmannconsultingllc@outlook.com>; Tyler Pepple <tcp@dvclaw.com>; Justen Rainey <justenr@pacounsel.org>; Tim Boyd <[redacted]; Jeff Burks <jburks@energystrat.com>; John Carr <jcarr@awec.solutions>; Ed Finklea <efinklea@awec.solutions>

Subject: Analysis of HB 2020 - Oregon Cap and Trade Legislation

Attachments: Memorandum re Cap and Trade Legislation (2 8 19).docx

---

AWEC members,

Please see the attached memorandum regarding the Oregon cap-and-trade legislation from our attorneys at Davison Van Cleve.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

Davison Van Cleve PC
Attorneys at Law
TEL (503) 241-7242 ● FAX (503) 241-8160 ● tcp@dvclaw.com
Suite 450
1750 SW Harbor Way
Portland, OR 97201

MEMORANDUM

Attorney/Client Privilege

February 7, 2019

TO: John Carr, Ed Finklea, J.L. Wilson, Justen Rainey
AWEC Oregon Members

FROM: Tyler Pepple

RE: Analysis of HB 2020 – Oregon Cap and Trade Legislation

I. INTRODUCTION

This memorandum provides an analysis of the major provisions of the recently released House Bill 2020 that would create a cap and trade program in Oregon beginning in 2021. The legislation would establish an economy-wide cap on carbon emissions, overseen by a newly created Carbon Policy Office. The cap would be designed to achieve reductions in carbon emissions to 45% below 1990 emissions levels by 2035 and 80% below 1990 emissions levels by 2050.

From AWEC's perspective, the members who stand to be most impacted by this legislation are members with facilities that: (1) purchase their electricity from electricity service suppliers ("ESS") pursuant to a direct access program; (2) have significant on-site emissions, particularly through natural gas purchases, but do not meet the criteria for being an "emissions intensive trade exposed" ("EITE") facility; and (3) members that *do* meet the criteria for being an EITE facility but are determined in a later rulemaking process to have less efficient operations than the sector average.

HB 2020 also lacks clarity in certain areas that may impact estimates of costs to AWEC members. For instance, while market purchases of electricity from unspecified sources are covered under the emissions cap created by the bill, the bill is silent on how a carbon intensity will be determined for such purchases. Additionally, the bill lacks clarity and specificity over how biomass cogeneration facilities are treated under a cap and trade program,

both with respect to the direct emissions from the facility, if located in-state, and whether emissions will be attributed to the electrical output from the facility, if located out-of-state.

II. ANALYSIS

A. General Framework of the Cap and Trade Program – Sections 9 and 19

Section 9 of HB 2020 establishes the general parameters for how the cap and trade program would work and who would be covered. This section requires the Carbon Policy Office to identify a baseline level of emissions by taking the average emissions over the three years prior to 2021 that are attributable to covered entities "for which greenhouse gas emissions information is available and verified by the" Carbon Policy Office.

After identifying the baseline emissions level, the Carbon Policy Office is then to adopt an allowance budget equal to the baseline (one allowance is equal to one metric ton of carbon dioxide equivalent) for 2021. The number of allowances would then decrease by a constant amount through 2035 to achieve the initial target of reducing emissions by 45% below 1990 levels. Beginning in 2036, the allowance amounts would again decrease by a constant amount until 2050 to achieve a 90% reduction in carbon emissions below 1990 levels.

Each entity identified as a "covered entity" in the legislation is required to acquire a "compliance instrument" for each metric ton of carbon emissions regulated under the cap and trade program. A "compliance instrument" can either be an allowance or an "offset credit." Both instruments are equivalent to one metric ton of carbon emissions. An allowance can either be purchased at the annual allowance auction established in the legislation or is directly allocated to certain covered entities, described in more detail below. An offset credit is obtained by undertaking a project not otherwise required by law that reduces or removes carbon emissions. An offset project can be undertaken anywhere in the United States or another jurisdiction that links its cap and trade program with Oregon, but the number of offset credits a covered entity can use for compliance is strictly limited. Only 8% of a compliance obligation can be met with offset credits, and only 4% of this obligation can be met with credits from projects that do not provide "direct environmental benefits" to Oregon.[1/] As a consequence, the vast majority of any entity's compliance obligation must be met by surrendering allowances.

B. Covered Entities – Section 9

The following entities are covered under the cap and trade program:

[1/] "Direct Environmental Benefits" is defined as: "(a) A reduction in or avoidance of emissions of any air contaminant in this state other than a greenhouse gas; (b) A reduction in or avoidance of pollution of any of the waters of this state …; or (c) An improvement in the health of natural and working lands in this state." "Natural and working lands" is also defined, and appears to mean nearly anything other than developed land (but including land developed for agricultural purposes).

(1) Facilities holding an Oregon air contamination permit that emit more than 25,000 metric tons of carbon dioxide equivalent. For reference, we understand this threshold to be equivalent to burning 4,500,000 therms of natural gas;

(2) All fossil fuel-fired electric generation facilities holding an Oregon air contamination permit, regardless of whether they emit more than 25,000 metric tons of carbon dioxide equivalent;

(3) All "electric system managers," meaning any entity that performs electricity scheduling services, with respect to the electricity generated out-of-state that they schedule for delivery into Oregon. This includes PGE, PacifiCorp, BPA, PNGC, any ESS, and any consumer-owned utility that does its own scheduling, like EWEB;

(4) All natural gas marketers with respect to emissions from natural gas they sell in Oregon;

(5) All natural gas utilities (i.e., Northwest Natural, Avista, and Cascade) with respect to the emissions from natural gas they sell in Oregon; and

(6) Any fuel producer or importer with respect to fuel that is sold or distributed in Oregon.

C. Exemptions – Sections 10 and 11

Any entity that is not a "covered entity" is exempt from compliance with the cap and trade law. As discussed below, however, that does not mean that exempt entities will be fully insulated from the costs of the program, as they may be exposed to higher electricity and natural gas prices.

The bill also expressly exempts other entities that might otherwise be covered. This includes the portion of emissions attributable to PacifiCorp's coal and gas plants that are paid for by its other states. It also includes emissions attributable to electricity scheduled for a consumer-owned utility if the three-year average of emissions is below 25,000 metric tons. Finally, emissions associated the use of "fluorinated greenhouse gases generated during semiconductor and related device manufacturing" are temporarily exempted until 2026.

One category of emissions sources for which additional clarity appears necessary is biomass cogeneration facilities. Any cogeneration facility that emits more than 25,000 metric tons of greenhouse gases is likely covered under the law, and whether the owner of that facility would face increased costs associated with this facility depends on their EITE status (discussed below). A cogeneration facility that emits fewer than 25,000 metric tons would need to have a permit that lists its North American Industry Classification System code as "fossil fuel electric power generation" in order to be covered under the program. Meanwhile, the bill also states that, for electricity scheduled by an electric system manager "that is generated from a renewable

energy resource and acquired without acquiring the renewable energy certificate associated with the electricity shall be considered to have the emissions attributes of the underlying renewable energy resource." It appears that the intention here is to specify that any out-of-state resource that qualifies for Oregon's renewable portfolio standard (including biomass) would not be deemed to have an emissions profile attached to the electricity it generated and delivered into Oregon for purposes of cap and trade if, and only if, the entity purchasing and delivering the electric output is also purchasing the renewable energy certificate ("REC") associated with that electricity. That, however, is not clear. "Renewable energy resource" is not defined, nor does the bill specify that the purchase of electricity from such a resource is deemed emission-free if it is bundled with a REC. Assuming this is the intention, however, this interpretation would appear to assign emissions to the entity purchasing the electrical output from an out-of-state cogeneration facility if that entity does not also purchase the RECs associated with it.

D. Allocation of Allowances – Sections 14-18

Certain covered entities would temporarily receive free allowances to meet their compliance obligations.

1. <u>Bundled service customers of PGE and PacifiCorp appear to be largely insulated from cost increases from cap and trade related to their electricity purchases at least through 2030.</u>

Electric companies, meaning only PGE and PacifiCorp, would receive free allowances to meet 100% of their covered emissions associated with meeting the load of their retail customers through 2030. The rationale for this treatment is that PGE and PacifiCorp are already meeting state carbon objectives through requirements in the 2016 "coal-to-clean" law, SB 1547, which requires them to fully depreciate their coal plants in Oregon rates by 2030 and meet a 50% renewable portfolio standard ("RPS") by 2040.

The number of allowances PGE and PacifiCorp would receive would be based on their forecasted emissions in their integrated resource plans ("IRPs"), meaning that the utilities could ultimately receive greater or fewer allowances than they ultimately need to offset compliance costs. It also means that the utilities may have an incentive to over-forecast the level of their emissions in their IRPs in order to obtain more allowances. After 2030, the number of allowances PGE and PacifiCorp receive declines at the same rate as the decline in overall available allowances.

2. <u>Electricity Service Suppliers receive no free allowances.</u>

Despite being subject to the same RPS requirements as PGE and PacifiCorp, and thus having a similar basis for receiving free allowances, ESSs are allocated no free allowances. ESSs will, therefore, need to purchase all of their allowances at auction, which is likely to increase costs for customers on direct access. Most direct access customers are on PGE's long-term opt-out program, which is open only to facilities with loads of at least one average megawatt. Thus, many of Oregon's largest companies are on direct access, including a number

of AWEC members. The disparate treatment of electric companies and ESSs appears unjustified given that both entities are subject to the same carbon reduction requirements outside of this cap and trade bill. It may also further insulate PGE and PacifiCorp from the competitive pressures of direct access – and the need to respond to those pressures through actions that benefit customers, like cost-control measures – by artificially increasing costs for direct access customers.

3. <u>BPA customers are likely to be fully protected from cost impacts in the first year of the cap and trade program, but may become increasingly exposed thereafter</u>.

While BPA operates carbon-free hydro resources, customers of utilities that purchase from BPA (other than those described above whose attributed emissions are less than 25,000 metric tons) nevertheless face potential cost increases under cap and trade based on the market purchases BPA makes. The level of cost exposure involved, however, is uncertain that this point because there is little clarity in the bill regarding the carbon content that will be applied to market purchases of unspecified power. While the bill specifies that such market purchases would be covered under the cap and trade program, the legislation does not appear to specify how the Carbon Policy Office is to establish a carbon content for such purchases.

Regardless of the resolution of this issue, however, BPA and other "electric system managers" that serve consumer-owned utilities will be allocated 100% of their allowances for the first year of the cap-and-trade program. That amount then declines annually at a constant rate to meet the state's carbon reduction goals. It is also worth noting that, while the bill eventually requires BPA to purchase allowances to offset the carbon content of its market purchases, it appears to give BPA no credit for the carbon free power the agency sells into that same market. In other words, BPA may be (and likely will be) carbon neutral from a load/resource balance perspective, but the bill does not recognize this. The impact of the carbon-free power BPA sells into the market could be factored into the carbon content of unspecified market purchases, but without specificity on this issue, it is impossible to know at this time.

It is also worth mentioning that, while BPA may be subject to some costs under cap and trade associated with market purchases, the overall impact of cap and trade on BPA's rates could be beneficial under certain circumstances. Historically, BPA has kept rates low by selling excess power into the market, thereby generating "secondary revenues." These secondary revenues have declined substantially in recent years due to low market prices, which has driven rates up. If cap and trade increases market prices, this could have the effect of increasing BPA's secondary revenues and allowing the agency to reduce its rates.

4. <u>Natural gas marketers also receive no free allowances, while gas utilities only receive sufficient free allowances to offset rate impacts to their low-income customers.</u>

Unless provided allowances as an EITE, discussed below, AWEC's gas transportation and sales members are fully exposed to the costs of cap and trade because their marketer or utility will need to purchase allowances to meet 100% of the emissions associated

with the gas they sell to any customer that is not a covered entity.[2] The only free allowances available for natural gas are those necessary to offset cost impacts to the LDCs' low-income customers, and the legislation specifies that these utilities may only use these allowances to minimize impacts on low-income customers.

5. EITE facilities will receive temporary cost relief from cap and trade, but EITE categories are limited and the amount of cost relief will vary by facility.

EITE facilities will receive free allocation of 100% of their allowances for the first year of the cap and trade program, 2021. After that, the number of allowances will decline annually to achieve the economy-wide carbon reductions identified above. The number of facilities that qualify for EITE status is limited in two ways. First, the facility must emit more than 25,000 metric tons of greenhouse gases. Second, it must fall into one of the delineated North American Industry Classification System ("NAICS") categories. These are:

(a) Cement Manufacturing, code 327310.
(b) Other Crushed and Broken Stone Mining and Quarrying, code 212319.
(c) Frozen Fruit, Juice and Vegetable Manufacturing, code 311411.
(d) Frozen Specialty Food Manufacturing, code 311412.
(e) Dried and Dehydrated Food Manufacturing, code 311423.
(f) Iron and Steel Mills and Ferroalloy Manufacturing, code 331110.
(g) Other Basic Inorganic Chemical Manufacturing, code 325180.
(h) All other Plastic Product Manufacturing, code 326199.
(i) Mineral Wool Manufacturing, code 327993.
(j) Polystyrene Foam Product Manufacturing, code 326140.
(k) Glass Container Manufacturing, code 327213.
(l) Ethyl Alcohol Manufacturing, code 325193.
(m) Reconstituted Wood Product Manufacturing, code 321219.
(n) Gypsum Product Manufacturing, code 327420.
(o) Pulp Mills, code 322110.
(p) Paper (Except Newsprint) Mills, code 322121.
(q) Paperboard Mills, code 322130.
(r) Semiconductor and Related Device Manufacturing, code 334413.

Any facility that does not meet both criteria – the emissions threshold and NAICS category – will be fully exposed to the costs of cap and trade.

Further, in addition to the fact that allowances will continuously decline for EITEs, some EITEs will fare better than others, depending on the efficiency of their processes and the number of similar facilities in Oregon. To establish the number of allowances each EITE

[2] Because covered entities are directly responsible for purchasing allowances associated with their emissions, they assume the costs of emissions associated with their gas consumption, so requiring the gas marketer or utility to also acquire allowances for these emissions would be double-counting.

facility receives, the Carbon Policy Office must first identify a "good-specific emissions calculation" for each good manufactured by an EITE facility in the state. This is performed by taking the three-year average of carbon emissions attributable to the manufacture of the good and dividing it by the three-year average of the output of the good.

If a good is manufactured by three or more facilities in the state, then this is calculation is done for the entire sector. Thus, in this instance, the calculation would sum the three-year averages for all of the EITE facilities that produce a particular good in the state. For example, if four facilities produced the same good, the calculation would be as follows:

Facility	3-Year Average Emissions	3-Year Average Output	Good-Specific Emissions Rate
Facility A	10 metric tons	100 widgets	0.1 MT/widget
Facility B	20 metric tons	150 widgets	0.13 MT/widget
Facility C	20 metric tons	200 widgets	0.1 MT/widget
Facility D	15 metric tons	100 widgets	0.15 MT/widget
Sector Total/Average	65 metric tons	550 widgets	0.12 MT/widget

Under this example, allowances would be distributed based on an emissions rate of 0.12 metric tons, meaning that Facility A and Facility C, would receive more allowances per good manufactured, and therefore fare better than Facility B and Facility D.

If, however, a good is only manufactured by one or two EITE facilities in the state, then the calculation described above is facility-specific rather than sector-specific. Under this scenario, the number of allowances a facility receives should more closely align with that facility's specific production process.

The legislation also provides the Carbon Policy Office with authority and discretion to increase the number of allowances an EITE facility receives, either because a change in the manufacturing process results in increased carbon emissions or because of a change in the external competitive environment that increases leakage risk.[3/] The office may also establish new EITE designations for entities that bring manufacturing to the state after cap and trade is implemented. By contrast, there is no way for an existing facility that does not meet the EITE requirements currently to later become designated as an EITE.

E. Allowance Auctions and Use of Proceeds – Sections 21, 22, 27-37, and 42-43

Section 21 of the bill provides rulemaking authority to the Carbon Policy Office to design and implement auctions of allowances. These auctions must be held at least annually. The rules must establish both a floor and a cap for allowance prices, but do not specify what the floor and cap must be. The bill does, however, require the Carbon Policy Office to consider prevailing carbon prices in other jurisdictions and what price would allow linkage with other

[3/] To enable the Carbon Policy Office to adjust the number of allowances for an EITE facility under this process, the legislation requires that a to-be-determined number of allowances in each auction be placed into a special reserve account.

jurisdictions. This appears to send a pretty strong signal that at least the initial allowance floor and cap should mirror prices in California and the other Western Climate Initiative states.

The bill also establishes a variety of funds and methods for holding and using auction proceeds. Proceeds from allowances that are not directly allocated go into one of three funds: the Transportation Decarbonization Investments Account; the Common School Fund; and the Climate Investments Fund. Essentially, the first two funds exist in the bill to comply with constitutional restrictions on the use of revenues from taxes on motor vehicle fuels and school-related property transfers, and the bill only allocates auction revenue to these funds that is required. The remainder goes into the Climate Investments Fund.

For reasons that are unclear, the bill includes three different sections detailing how revenue in the Climate Investments Fund is to be used. This includes allocation to other funds that exist within the Climate Investments Fund. Ten percent of the revenue must be allocated to projects that benefit Indian tribes; an as-yet unspecified percentage is to be allocated to the Oregon Climate Action Program Operating Fund, which funds the Carbon Policy Office; and an also as-yet unspecified minimum dollar amount is to be allocated to the Just Transition Fund, which pays for job training and financial support for "workers dislocated or adversely affected by climate change or climate change policies." The Carbon Policy Office then has broad discretion over how it uses the remainder of the revenue in the Climate Investments Fund. The bill offers suggestions, but only requires that the use of the revenues be consistent with the policies established in Section 7 of the bill. These policies are broadly phrased, but do include "assistance to … businesses … impacted by the transition in this state to an economic system that allows for the State of Oregon to achieve [its] greenhouse gas reduction goals." This would seem to allow for at least the possibility that businesses impacted by this bill but ineligible for free allowances could still obtain assistance to offset increased costs.

The bill also specifies how revenue received by electric companies and natural gas utilities through the sale of freely allocated allowances is to be used. This includes funding activities that reduce greenhouse gas emissions or provide energy assistance to the electric or gas utility's retail customers. As noted above, however, the natural gas customers eligible for energy assistance are limited to low-income customers. The bill also requires the electric and gas utilities to prioritize: "rate design based solutions"; bill assistance, weatherization, conservation, transportation electrification, and grid modernization; and low-income energy efficiency. It is unclear what "rate design based solutions" means. Ultimately, any approved use of allowance proceeds will be determined by the Public Utility Commission.

D. Repeal of Carbon Dioxide Emissions Standard – Section 54

One clear benefit from the cap and trade bill is the repeal of the carbon dioxide emissions standard. This is presumably done to avoid double-counting emissions through this standard and the requirement to purchase allowances. The carbon dioxide emissions standard applies to in-state fossil fuel-fired generation facilities and requires these facilities to meet an efficiency threshold or pay to emit greenhouse gases above this threshold. The threshold is deliberately designed to be unachievable, so every applicable facility must pay some emissions

penalty under this law. In 2017, PGE paid $18 million to comply with the carbon dioxide emissions standard. If the cap and trade law is passed, however, PGE would no longer need to make this payment, and would receive free allowances to cover its emissions through 2030, resulting in a net savings for customers at least through this period.

III. CONCLUSION

HB 2020 is detailed and complex, but also raises significant uncertainty for AWEC members with regard to their potential cost obligations. The legislation delegates major decisions to the rulemaking authority of the newly created Carbon Policy Office, including establishment of a range of allowance auction prices, the carbon content of unspecified electricity purchases, and the calculation of baseline emissions. It also creates clear winners and losers in often arbitrary fashion. Bundled customers of PGE and PacifiCorp are largely protected for the first ten years of the program, while direct access customers are not. Significant consumers of natural gas are fully exposed to costs unless they fall into a specified EITE category. And EITE facilities are treated differently depending on how many similar facilities there are in the state. Given the uncertainties and disparate treatment of customers, and barring outright defeat of the legislation, there seem to be good arguments to propose amendments to the legislation to better protect the customers who are most impacted by it.

Please feel free to contact me if you have any questions or would like additional information on any aspects of the cap and trade legislation.

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 02/15/2019 09:21:05 AM

To: Aldis.Raisters@gapac.com; kwilson@legadv.com; kristin.b.marshall@boeing.com; lori@lorievans.us; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; mruckwardt@schn.com; mingon@ohsu.edu; todd.wiseman@solvay.com; tom@richlandpaper.com; jeff.steed@northwesthardwoods.com; mary mccordic@shell.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; Ted@cmsnaturalgas com; teresa.acosta@calpinesolutions.com; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Amy Beck <amy.beck2@boeing.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Brad Beavers <bbeavers@timberproducts.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@nippondynawave.com>; Bruce Martin <bruce.martin@westrock.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Charley Hathaway <charley.hathaway@nwpsllc.com>; Charley <[redacted]>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Courtney Smith <courtney.smith@shell.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Dan Coyne <dancoyne@coynenet.com>; David Barge <DABarge@marathonpetroleum.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Tobin <DavidTobin@boisepaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Fawn Barrie <fbarrie@legadv.com>; Gary Londo <gary.j.londo@boeing.com>; Graham Bailey <graham.bailey@nippondynawave.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Ponderay <JAMIN.SIMMONS@resolutefp.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; Justen Rainey <JustenR@pacounsel.org>; Keith Warner <keith.c.warner@boeing.com>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Ma <Mark.Brown@teck.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.rog>; Mark Steele <Mark.Steele@norpac.com>; Marty Sedler <marty.sedler@intel.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@rocktenn.com>; Michael Kuhn <mike.kuhn@westrock.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Kaiser, Nick <Nick.Kaiser@nippondynawave.com>; Noel Mak <Noel.Mak@atimetals.com>; Pat Ealy <pat.ealy@akzonobel.com>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Pat Lydon <PLydon@lhs.org>; Pat Ortiz <pat.ortiz@westrock.com>; Paul Langley; Phil Pesek <Phil.Pesek@teck.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Samuel Liebelt <samuel.liebelt@westrock.com>; Sandi Swarthout <sswarthout@capconn.net>; Scott, Edgar <Edgar.Scott@kaiseraluminum.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <SRHawley@marathonpetroleum.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steven Castracane <steven.castracane@linde.com>; Thomas Rozwood <tom.rozwod@norpacpaper.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Yarborough <Tom.yarborough@weyerhaeuser.com>; Tony Hardenbrook; Tyler Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Ben Byman <Ben.Byman@lvpnp.com>; Ben Byman <ben.byman@weyerhaeuser.com>; Bill Gilmore <billmg@penwool.com>; Clay Riding <clayr@nw-iw.com>; Dave Rickman <dave.rickman@kaisertwd.com>; David Hawk <[redacted]; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Bryck (US), Drew M <drew.m.bryck@boeing.com>; Hendricksen, Don <[redacted]>; JaDPrice <JaDPrice@gapac.com>; Jared Sommer <sommerj@byui.edu>; Jeff Steed <jeff.steed@northwestharдswoods.com>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kristine Dippold <Kristine.A.Dippold@boeing.com>; Kyle Williams <williamsk@byui.edu>; Laura Jane Schaefer <schaefel@ohsu.edu>; Nick Avenetti <nick@perlite.com>; Phil Foss <phil.foss@onsemi.com>; Rick Stricker <rstricker@baf.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Steve O'Brien <sobrien@baf.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Wes Hill <Wes.Hill@gapac.com>; Chuck Gates <[redacted]; Nancy Holbrook <Nancy.Holbrook@bp.com>; Nancy Hollbrook <Nancy.Richardson@bp.com>; Robert Pierce <robert.pierce@shell.com>; Francone, Kelly <kfrancone@energystrat.com>

Subject: AWEC Quarterly Member Meeting in Portland, March 6th

---

Dear AWEC Members:

AWEC will be hosting its 1st meeting of the year on Wednesday, March 6th, at the Portland Sheraton Airport Hotel from 8:00 AM to 3:30 PM PST. A seated breakfast will be served beginning at **8:00 AM**, with the electric portion of the meeting scheduled from **9:00 am to noon**, with lunch following.

Dave Danner, Chair of the WUTC, will be our keynote speaker at the luncheon. With all the significant changes occurring in the energy field, it will be a unique opportunity to hear Dave's insights from a Chairman's perspective.

The gas section of the meeting will follow the luncheon from **1:00 PM to 2:30 PM**.

Call-in information will be available when the agenda is issued. The complete documents will be sent out the day before the meeting.

We do have a limited reduced hotel room rate at $159. We only have a few rooms left – the rate today under Expedia is $189.

https://www.marriott.com/hotels/travel/pdxsi-sheraton-portland-airport-hotel/

Please RSVP at kfrancone@energystrat.com.

Please let us know if you have any questions.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Kelly Francone <kfrancone@energystrat.com>
Sent time: 02/18/2019 08:29:35 AM
To: Tony Hardenbrook
Cc: Desiree Higgins
Subject: Re: Hotel Reservations for Upcoming AWEC Meeting

You should call the hotel directly and indicate that you would like to use our AWEC block rate at $159. There were a few rooms left at that rate on Friday

Kelly Francone
Sent from my iPhone

On Feb 18, 2019, at 8:35 AM, Tony Hardenbrook <aharden2@uoregon.edu> wrote:

Kelly,

I'd like to stay at the Sheraton on March 5th, do we directly book the room or do we need to run the RSVP through you?

R/
Tony

Tony Hardenbrook
Director of Utilities and Energy
Campus Planning and Facilities Management
University of Oregon
aharden2@uoregon.edu
541-346-9007

Safety * Continuity * Efficiency

Dear AWEC Members:

AWEC will be hosting its 1st meeting of the year on Wednesday, March 6th, at the Portland Sheraton Airport Hotel from 8:00 AM to 3:30 PM PST. A seated breakfast will be served beginning at **8:00 AM**, with the electric portion of the meeting scheduled from **9:00 am to noon**, with lunch following.

Dave Danner, Chair of the WUTC, will be our keynote speaker at the luncheon. With all the significant changes occurring in the energy field, it will be a unique opportunity to hear Dave's insights from a Chairman's perspective.

The gas section of the meeting will follow the luncheon from **1:00 PM to 2:30 PM**.

Call-in information will be available when the agenda is issued. The complete documents will be sent out the day before the meeting.

We do have a limited reduced hotel room rate at $159. We only have a few rooms left – the rate today under Expedia is $189.

https://www.marriott.com/hotels/travel/pdxsi-sheraton-portland-airport-hotel/

Please RSVP at kfrancone@energystrat.com.

Please let us know if you have any questions.

Kelly Francone
Senior Consultant
Energy Strategies

215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From:	Kelly Francone <kfrancone@energystrat.com>
Sent time:	02/20/2019 10:22:28 AM
To:	Desiree Higgins
Cc:	Tony Hardenbrook
Subject:	RE: RSVP - AWEC Quarterly Member Meeting in Portland, March 6th

Thanks. I will have him down.

From: Desiree Higgins <desireeh@uoregon.edu>
Sent: Wednesday, February 20, 2019 10:55 AM
To: kfrancone@energystrat.com
Cc: Tony Hardenbrook <aharden2@uoregon.edu>
Subject: RSVP - AWEC Quarterly Member Meeting in Portland, March 6th

Good Morning Kelly,

My supervisor, Tony Hardenbrook, the Director of Utilities & Energy at the University of Oregon will be attending the meeting on 3/6 in Portland.

Thank you!

Desiree Higgins

From: Kelly Francone <kfrancone@energystrat com>

Sent time: 02/07/2019 02:45:55 PM

To: Aldis Raisters@gapac com; kwilson@legadv com; Martha_C@columbiasteel com; marycatherine mcaleer@weyerhaeuser com; mruckwardt@schn com; todd wiseman@solvay com; tom@richlandpaper com; Wes Hill@gapac com; mary mccordic@shell com; Beth@cmsnaturalgas com; CMS@cmsnaturalgas com; James_Clarken@oxy com; jpino@uetllc com; randy schultz@bp com; rgreenwell@uetllc com; [redacted] rick kunz@shell com; Ted@cmsnaturalgas com; teresa acosta@calpinesolutions com; Kelly Francone <kfrancone@energystrat com>; Alicia Fuentes <Alicia Fuentes@solvay com>; Alicia Givens <agivens@pacounsel org>; Amy Beck <amy beck2@boeing com>; Bernie McNamee <bmcnamee@timberproducts com>; Bill Castleberry <Bill Castleberry@emeraldmaterials com>; Brad Beavers <bbeavers@timberproducts com>; Bradley Mullins <brmullins@mwanalytics com>; Brian Wood <brian wood@nippondynawave com>; Calli Daly <calli daly@kochps com>; Calvin Greene <[redacted]; Charley Hathaway <charley hathaway@nwpsllc com>; Charley <[redacted]>; Chris Horn <chris_h@columbiasteel com>; Clifford Barr <Clifford G Barr@tsocorp com>; Courtney Smith <courtney smith@shell com>; Craig Anneberg <Craig anneberg@norpacpaper com>; Dan Coyne <dancoyne@coynenet com>; David Barge <DABarge@marathonpetroleum com>; David Clemens <David Clemens@darigold com>; David Elliot <davidelliott@boisebuilding com>; David Tobin <DavidTobin@boisepaper com>; Delee Shoemaker <delees@microsoft com>; Dennis <Dennis Draleau@recsilicon com>; Don Hendricksen <donald j hendrickson@boeing com>; Donna Gehlhaart <Donna Gehlhaart@ipaper com>; Doug Krapas <dougkrapas@iepco com>; Drew Bryck <drew m bryck@boeing com>; Drew Gilpin <drew gilpin@evrazna com>; Ed Finklea <efinklea@awec solutions>; Fawn Barrie <fbarrie@legadv com>; Gary Londo <gary j londo@boeing com>; Graham Bailey <graham bailey@nippondynawave com>; Greg Vaughn <greg vaughn@resolutefp com>; Irene Plenefisch (LCA) <irenep@microsoft com>; Janese Pearson <Janese Pierson@ipaper com>; Ponderay <JAMIN SIMMONS@resolutefp com>; Jeff Johnson <Jeff Johnson@recsilicon com>; Jennifer <jenny@pacounsel org>; Jennifer Hackett <Jena Hackett@ipaper com>; Jim Stanton <jstanton@microsoft com>; JL Wilson <jlwilson@pacounsel org>; John Bob <John Bob@am dynonobel com>; John Carr <jcarr@awec solutions>; Josh Weber <jdw@dvclaw com>; Justen Rainey <JustenR@pacounsel org>; Ken Dey <ken dey@simplot com>; Ken Johnson <ken johnson@recsilicon com>; Kenneth Li <kenneth Li@gapac com>; Kevin Davis <kevin_davis@iepco com>; Kevin Rasler <kevin_rasler@iepco com>; Khaly Niang <Khaly Niang@airliquide com>; Larry Voos <larry voos@norpacpaper com>; Leslie Adams <adamsla@airproducts com>; Luke Hart <Luke Hart@axiall com>; Marcie Peters <marcie peters@solvay com>; Mark Dunn <mark dunn@simplot com>; Mark Nelson <pacounsel@pacounsel org>; Mark Steele <steele@norpac com>; Matt Upmeyer <matt upmeyer@lambweston com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick Houser@ipaper com>; Michael Culver <michael culver@ipaper com>; Michael Kuhn <MKuhn@rocktenn com>; Michael Padgett <Michael Padgett@alcoa com>; Mike Hale <Michael Hale@simplot com>; Mitch Maynard <mmaynard@deltaenergyllc com>; Kaiser, Nick <Nick Kaiser@nippondynawave com>; Pat Ealy <pat ealy@akzonobel com>; Patrick Loupin <PatrickLoupin@packagingcorp com>; Pat Lydon <PLydon@lhs org>; Pat Ortiz <pat ortiz@westrock com>; Paul Langley; Ralph Saperstein <Ralph@ralphsaperstein com>; Randy Clancy <clancyrb@airproducts com>; Raymond L Beard <BEARDRL@airproducts com>; Richard White <richard a white7@boeing com>; Rob Buckingham <rob buckingham@norpacpaper com>; Rob Freres <rtfreres@freres lumber com>; Ryan Beaver <Ryan Beaver@weyerhaeuser com>; Ryan Spiller <Ryan@capconn net>; Samantha Julian <Samanthaj@pacounsel org>; Samuel Liebelt <samuel liebelt@westrock com>; Sandi Swarthout <sswarthout@capconn net>; Scott Gutting <sgutting@energystrat com>; Scott Hawley <SRHawley@marathonpetroleum com>; Scott Wagener <Scott Wagener@spfibertech com>; Skylar <Skyler Mlasko@northwesthardwoods com>; Spiro E Xenos <spiro e xenos@boeing com>; Stan Jackson <S Jackson@shell com>; Steven Castracane <steven castracane@linde com>; Tim Boyd <[redacted]; Tim Root <timothy root@axiall com>; Tom Yarborough <Tom yarborough@weyerhaeuser com>; Tony Hardenbrook; Tyler Pepple <tcp@dvclaw com>; Tyne Brownlow <tyne brownlow@ipaper com>; Bill Gilmore <billmg@penwool com>; Chad Stokes <cstokes@cablehuston com>; Clay Riding <clayr@nw-iw com>; Daryll Fuentes <dfuentes@usg com>; David Hawk <[redacted]; David Jones <david jones@swansongroup biz>; Jake Evans <Jake evans@onsemi com>; Jared Sommer <sommerj@byui edu>; Jim Duke <jduke@idahoan com>; Joe Burrell <Joseph g burrell@jci com>; Kyle Williams <williamsk@byui edu>; Nick Avenetti <nick@perlite com>; Phil Foss <phil foss@onsemi com>; Rick Stricker <rstricker@baf com>; Ron Tarver <ron tarver@swansongroup biz>; Sam Merrick <merricks@byui edu>; Scott Kennedy <scott kennedy@kaisertwd com>; Sharon Andersen <Sharon w anderson@intel com>; Steve O'Brien <sobrien@baf com>; Tommy Brooks <tbrooks@cablehuston com>; Chuck Gates <[redacted]; Nancy Holbrook <Nancy Holbrook@bp com>; Nancy Hollbrook <Nancy Richardson@bp com>; Robert Pierce <robert pierce@shell com>; Rusty Williams <williwk@bp com>; Keegan Moyer <kmoyer@energystrat com>; Jeff Fishman <jfishman@energystrat com>; Jeff Burks <jburks@energystrat com>

Subject: AWEC Energy Brief

This energy brief is provided by Energy Strategies

on behalf of the Alliance of Western Energy Consumers.

http://www.awec.solutions

PacifiCorp Delaying 2019 IRP to Finish Coal, Reliability Study, Steve Ernst – Clearing Up

PacifiCorp will delay release of its 2019 Integrated Resource Plan to complete an economic analysis of its coal fleet and the reliability impacts of potentially closing some units.

The utility told the Oregon PUC in a Jan. 28 letter that it is extending the anticipated filing date from April 1 to no later than Aug. 1.

Roughly 60 percent of PacifiCorp's coal units could potentially be retired in 2022 and replaced with renewables or natural gas-fired generation, according to the company's economic analysis released at its 2019 IRP stakeholders meeting on Dec. 3 and 4.

The utility at the time emphasized that additional study would be needed to determine which, if any, coal units would be eligible for early retirement. The delay in the release of the IRP will give PacifiCorp additional time to analyze

the reliability impacts and replacement costs of retiring certain plants, using a "stacked analysis" that evaluates combinations of units for closure in 2022.

"PacifiCorp presented preliminary studies on its coal unit economic analysis at an IRP public-input meeting. This analysis identified potential reliability challenges that must be resolved before the coal studies can be completed," the utility said in its letter to the commission.

The economic analysis of its coal units will inform the subsequent portfolio-development phase of the 2019 IRP, including an assessment of regional haze compliance alternatives and a broad range of sensitivity studies, the utility said.

Rick Link, VP of resource planning and acquisitions at PacifiCorp, told Clearing Up in December that reliability would now be the focus of the company's analysis.

"One element we are focusing on now is that any portfolio or scenario has to at a minimum meet our reliability obligations," Link said. "We need to ensure that this is captured in our work, that is now our priority."

The study shows the "largest potential benefits" of earlier retirements coming from a cluster of three groups of power plants located in Utah, Colorado and Wyoming.
PacifiCorp said it "will continue its robust and transparent stakeholder-input process with additional monthly public-input meetings scheduled up to the extended filing date to ensure stakeholders are kept up-to-date regarding the company' s analysis and overall progress."

Oregon lawmakers propose statewide cap-and-trade program, Jeff Stanfield - SNL

Oregon lawmakers introduced a bill to place a statewide cap on greenhouse gas emissions and provide a market-based mechanism to trade emissions allowances.
During a hearing Feb. 1, the state's bipartisan 14-member Joint Committee on Carbon Reduction agreed to introduce the bill to require power generators that burn fossil fuel and other industrial sources of carbon pollution to reduce emissions to at least 45% below 1990 levels by 2035 and to 80% below 1990 levels by 2050.

The proposed legislation calls for allowances to be offered in auctions. Emissions sources would have to participate in the auctions if they emit carbon dioxide above the limits set with the cap. Auction revenues would be invested in the Oregon Climate Action Program for energy efficiency, energy conservation, low-income housing weatherization and other measures. A Carbon Policy Office would also be established within the Oregon Department of Administrative Services to administer the program.

At least 10 senators and representatives agreed to introduce the bill, but four of those members said they would do so only to get legislation started and they opposed at least some of the provisions in the proposal. Two members spoke in opposition to introducing the bill. The join panel included eight Democratic members and six Republican members.

Sen. Michael Dembrow, who sponsored a cap-and-trade emissions bill in 2017, co-chaired the panel with Rep. Karin Power, who moved to introduce a bill based on LC 894. The law would take effect Jan. 1, 2021, but rulemaking for the program would begin on the effective date of the act.

Electric utilities that would probably have to comply include Portland General Electric Co., Berkshire Hathaway Inc.subsidiary PacifiCorp, and IDACORP Inc. subsidiary Idaho Power Co. Regulated natural gas companies including Avista Corp.'s Avista Utilities Inc., Cascade Natural Gas Corp.and NW Natural Holdings may also be required to comply.

Electric and natural gas utilities would receive free allowances based on low-income residential customers, McGee said. Consumer-owned utilities would also get allowances to reduce carbon emissions.

Co-Vice Chair Sen. Cliff Bentz opposed the bill drafting, saying no Republicans were involved in drafting the bill. Sen. Fred Girod said he did not want his name in any way associated with the bill.

All-Party Settlement Reached in PSE General Rate Case, Steve Ernst – Clearing Up

Puget Sound Energy's natural gas rates would increase 2.9 pe cent, while electric rates would remain unchanged, according to an all-party settlement announced Jan. 30 in the utility's general rate case.

In November, PSE requested an $18.9 million, or 0.9 percent, overall rate increase for its electric customers, and a 2.9 percent increase to its natural gas rates that would have collected $21.7 million annually.

The Washington UTC approved the company' s last rate increase in December 2017 that provided an overall 1 percent increase in electric rates and a decrease of 3.9 percent in natural gas rates.

The all-party settlement in the 2017 rate case also included a provision that allowed PSE to submit an expedited rate case within one year for limited rate relief not exceeding a 3 percent increase for any customer class. In addition, under that settlement the filing could not include changes to PSE' s power costs, purchased gas, the gas pipeline cost recovery mechanism, capital structure, return on equity, rate spread or rate design.

As part of the recently announced all-party settlement, PSE also committed to providing approximately $130,000 in additional funds for the natural gas Home Energy Lifeline Program, or HELP, which offers bill-assistance to eligible PSE customers.

The all-party settlement was signed by the company and commission energy staff, along with the Public Counsel Unit of the Attorney General's Office, Alliance of Washington Energy Consumers, The Energy Project, the Federal Executive Agencies and Nucor Steel.

If the commission approves the settlement, the new rates will start March 1.

The commission will take public comments on the settlement in a hearing at 6 p.m. on Feb. 5 at the commission's headquarters in Olympia.

Bulked-Up Clean Energy Bill Passes Out of Senate Energy Committee, Rick Adair – Clearing Up

A bill to decarbonize Washington's power supply passed out of the Senate's energy committee Jan. 29, a mere two weeks after the 105-day session started and bulked up with new provisions that almost doubled its size to around 40 pages.

The measure, Senate Bill 5116, part of Gov. Jay Inslee's clean energy and orca agenda, goes next to the Senate Ways and Means Committee, although a date hasn't been assigned.

The measure garnered the approval of all but one of the panel's 10 Democrats; the 10th, Steve Hobbs of Lake Stevens, took no official position. Four of the committee's five Republicans recommended not passing the measure, while the fifth, Phil Fortunato (Auburn), referred the bill out of committee with no recommendation.

Sen. Tim Sheldon (D-Potlatch), who caucuses with the Republicans on some fiscal issues, endorsed the bill, as he did the failed carbon tax bill from the previous session, when he said, "I think we're really at a crossroads here, this state," before voting to move it out of committee.

Hobbs opposed last year's carbon tax bill, which he said would have led to a large gasoline tax and didn't provide enough funds for the transportation budget. He proposed an amendment for this year's carbon bill which he withdrew because of technical issues-that would have counted generation used to comply with the carbon-neutral and carbon-free mandates toward compliance with the state's RPS.

In the lead-up to the SB 5116 vote, Sen. Reuven Carlyle (D-Seattle), the committee chair and principal bill author, described the measure as "very important" and "historic," in part because of its "bold stand in moving past coal as a central part of our energy source."

In his comments, Sheldon noted that the bill would allow Washington to join the rest of the West Coast, including British Columbia, in having a carbon standard, and that BPA would be a "very big" partner in attaining the

standard.

Sen. Shelly Short (R-Addy) said "renewable energy is not a bad thing," but added that how it is put in place and the impact to ratepayers are vital considerations. "We have to be willing to act on the impacts if they are shown to be just too much for the citizens of Washington state to bear."

Among the original bill's provisions, the key ones are requiring electric utilities to phase out coal-fired generation by 2025, including imported power; all retail sales of electricity be greenhouse-gas neutral by 2030; and the elimination of all fossil-fueled generation by 2045.

The bill sets the penalty for noncompliance with these mandates at $100/MWh, adjusted for inflation; requires electrical and gas companies to use a carbon adder for planning, evaluating and acquiring all resources; and bars compliance using generation from new hydro construction, unless it's for the operation of a pumped storage facility.

The updated measure reduces the noncompliance penalty from $100/MWh to $60/MWh; allows compliance with the 2030 carbon-neutral requirement to take into account cost considerations; removes the penalty for not complying with the 2045 carbon-free standard, but maintains it as state policy; and requires using the EPA's social cost of GHG emissions for planning and acquisition, rather than a carbon adder based on the alter native compliance payment established by the state.

It also adds a process for waiving penalties and suspending standards if grid reliability is threatened, and allows the governor to waive penalties by declaring a hydropower drought.

In addition, it considerably beefs up the oversight function of a biennial report issued jointly by the Washington UTC and state Commerce Department, particularly in evaluating cost impacts and identifying issues associated with generation and transmission inadequacy.

If the joint report indicates adverse system reliability impacts from implementing the carbon-neutral and carbon-free mandates, the governor is allowed to suspend or delay the law until system reliability impacts can be addressed.

Other provisions of the amended bill allow compliance by using hydro generation in pipes, culverts and irrigation canals; and add rate recovery for undepreciated investments in coal plants, including transmission lines.

Along the road to bill passage, 17 amendments were proposed for the striking substitute, and all but two failed or were withdrawn.

One that passed, from Sheldon, eliminated a section allowing an investor-owned utility to recover stranded investments from a consumer-owned utility that acquired them through condemnation. Sheldon noted that the provision "is not germane" to the bill's intent, and could reignite a legislative battle fought in the 1960s over utility territories.

"I think this is maybe an issue we should put on the back burner" and revisit during the Legislature's interim session, he said.

The other amendment that was adopted, from Short, required an assessment of the act's impacts on middle-income families, small businesses and manufacturers.

The failed amendments would have eliminated the state's RPS if the bill passed; excluded manufacturing and industrial customers from complying with the law's mandates; required firm baseload resources to be on par with renewables; suspended enforcement of the bill if rates increase, or if exports or manufacturing decrease; and declared that opposition to removing any dam in the Columbia River system, including the Snake River dams, was the state's policy.

Meanwhile, negotiations on the measure's counterpart, House Bill 1211, may have progressed enough to be considered for a committee vote, which has been penciled in for Feb. 5 and 7. A previously scheduled vote scheduled for Jan. 31 was canceled.

BPA Q1 Results for Year-End ‘Hovering’ Around Rate Case Levels, Rick Adair – Clearing Up

Results from the first quarter of fiscal year 2019 show BPA "hovering around rate-case levels" for its end-of-year net revenue forecast, despite expectations that revenues will be lower for both Power Services and Transmission Services, Bonneville CFO Michelle Manary said Jan. 29 during a quarterly business review.

The lower revenues will largely be offset by cost management efforts, she added.

Also, in a departure from recent practice, Manary didn't provide a risk analysis for the end-of-year forecast-which is based on reserves for risk-because she is undertaking a "deep-dive" improvement effort on the agency's reserves-reporting process.

Reserves for risk-funds held in reserve to cover agency expenses if need be-factor into BPA's decision to trigger a rate adjustment clause to ensure revenue requirements are met.

"Because of the fundamental work we're doing on reserves, and the significant hydro and market uncertainty that exists this early in the year, we've decided not to share a reserves forecast for Q1," she said, opting to first complete the improvement efforts, and then provide a forecast at the end of the second quarter.

Dissecting the net revenue forecast, Manary said that while Power's expenses are $45 million less that the BP-18 rate-case projection, "driven strongly by cost management actions implemented at the beginning of the" fiscal year, its revenues are expected to be $24 million lower and to "underperform," mainly due to a regional load loss and water supply forecasted to be slightly below-average.

Joel Cook, senior VP of Power Services, noted during his presentation that the lower loads were from preference customers and from Alcoa exercising the right to terminate its power purchase agreement at the end of August 2019.

BPA spokeswoman Kristel Turner told Clearing Up that preference loads have come in about 200 MW lower than the rate-case expectation, in part from load growth forecasts not materializing, and in part from one large industrial load "that had uncertain load loss. "The financial impact of this decrease will be "substantially mitigated by the anticipated use of liquidated damages for about 100 MW" associated with the industrial load, Turner said.

The Alcoa termination would decrease FY 2019 loads by about 75 MW, Turner said.

Transmission's expenses are expected to be $3 million more that rate-case projections "largely due to updated depreciation and amortization expenses" from the most recent depreciation study, and from lower capital spending levels, she said.

Transmission's revenues will likely underperform rate-case levels primarily due to more deferrals of service and capacity requests for transmission, she said.

Looking only at expenses managed per commitments made in the 2018 Integrated Program Review, BPA ' s end-of-year forecast is $51 million less than the rate case expectations, largely due to Power and Transmission cost management efforts.

The end-of-year forecast for combined IPR and non-IPR expenses-which are driven mostly by market hydro conditions-is $196 million under rate case expectations due to proactive cost management, Manary said, and also from regional cooperation debt refinancing, which uses proceeds from the refinancing of Columbia Generating Station bonds, expected to amount to $159 million this fiscal year.

However, she said, Bonneville expects to reduce expenses this fiscal year by around same amount, mitigating the impact of regional cooperation debt refinancing. This is "one of the improvements we're making in BP-20, so that those differences are not so large when we do comparisons starting in FY 20."

Removing the effects of regional cooperation debt from the net revenue forecast, BPA total expenses are anticipated to be $38 million under the

rate case projection. Taking into account lower revenues and lower expenses, BPA currently anticipates ending the year $160 million above rate case expectations or $6 million when adjusted for management actions.

"We are still early in the year and there is a lot of uncertainty," she said. "Net revenues are a key indicator of our financial health and will be a key metric to watch as the year progresses."

Also providing an update was Nita Zimmerman, deputy executive VP of Bonneville's business transformation office, who said grid modernization will be the only key strategic initiative the agency will pursue in FY 2019.

While "Grid Mod" does include exploring whether BPA should join an energy imbalance market, most of the work being done will continue regardless of BPA' s decision because it provides independent value by bringing the agency's systems, processes and skills up to date, she said.

One success already accomplished under this initiative is completion of two projects in FY 2018, Zimmerman said.

One is a marketing and settlement solution project that replaced Bonneville's system used for reporting power trading settlements and clearing functions for transactions with the California ISO, which she says has an estimated net benefit of $3.3 million over the next five years.

"The project gives us an automated system to manage the growing complexity of efforts with CAISO," Zimmerman said. It verifies transactions-sales and deliveries-that were previously done manually. While the transactions used to occur hourly, some now settle every five minutes, she said.

In addition to alleviating the burden of manual settlements, the new system also provides "better situational awareness through improved access to real-time market data, increasing secondary revenue opportunities," she said.

The other success is a "continuous outage management system," which is designed to identify optimal timing for outages early in the planning process, mainly for BPA's 500 kV equipment.

She said it creates a "more collaborative effort across BPA," and mitigates negative operational impacts.

Ultimately, she said, it helps lessen the customer impacts from maintenance by reducing the number of outages and optimizing transmission capacity.

A pilot use of the system was used for a maintenance outage on a line in the Ross district that identified flexibilities not immediately obvious. This led to preventive maintenance taking place without a negative impact on fish operations, and saved BPA money, she said.

In another instance, the process helped schedule an outage at The Dalles for work on the Big Eddy substation, which she said created an approach that minimized the impact of the outage by preventing overspills at the dam that might have harmed fish.

In upcoming planning events for BPA's Transmission Services, Richard Shaheen, senior VP of Transmission Services, noted that the first draft has been completed of a funding and planning agreement for a regional planning organization proposed to replace the ColumbiaGrid and Norther Tier Transmission Group organizations. Transmission has also started a draft agreement for an RPO vendor, he said.

Shaheen said regulated utilities are expected to provide FERC staff an update of their RPO efforts in late February.

The next QBR is planned for April 30.

Oregon Governor Proposes Plan to Fight Climate Change, Steve Ernst – Clearing Up

Oregon would tighten its greenhouse gas emissions goals and institute a carbon emissions trading market as part of the long-anticipated Oregon Climate Action Program, a sweeping piece of legislation that would impact nearly every comer of the state' s economy.

The climate program was released by Gov. Kate Brown's office late in the

afternoon on Jan. 31 as a 98-page legislative concept *[LC 894)* and was still being reviewed by utilities, businesses and environmental groups by Clearing Up deadline.

The bill calls for tightening the state's emissions reduction goals to 45 percent below 1990 levels by 2035, and 80 percent below 1990 levels by 2050. The state's previous goals were 10 percent below 1990 levels by 2020 and 75 percent by 2050.

The emissions cap would still be set at 25,000 metric tons of carbon emissions per year.

The plan calls for reaching those reductions using an emissions trading program that would be administered by a newly created Carbon Policy Office. The market would begin in 2021 by allocating direct allowances to utilities to cover all emissions until 2030. Natural gas distribution utilities would be given direct allowances to cover only emissions associated with natural gas supplies to low-income customers.

"Emissions intensive, trade exposed" businesses would also get 100 percent direct allowances in 2021, but the amount of allowances would step down between 2022 to 2030, steadily declining "by a constant amount necessary" to meet the 45 percent below 1990 emissions levels by 2035.

The Carbon Policy Office would hold annual allowance auctions with the revenues going to a Climate Investment Fund that would be invested in programs to further reduce emissions, energy efficiency and clean energy programs.

The proposal also calls for Oregon to join California and Quebec in an emission trading market.

The governor's office, utilities, business groups and environmental advocates have been working on the program since last year's Legislature ended with the defeat of a similar bill.

"There were really no surprises with this," one utility lobbyist told Clearing Up, who asked not to be identified. "The IOUs got pretty much what they wanted, and trade exposed industry also got what they wanted."

"We heard a lot of stories about businesses going to the governor saying 'if you do this, we'll move to Idaho,'" he said. "I think Governor Brown listened to that."

Both Portland General Electric and PacifiCorp said during the last legislative session that any climate bill would have to consider the work utilities have already done to lower emissions, such as investments in renew able energy, as well as the state's landmark Coal-to-Clean law that prohibits Oregon ratepayers from paying for imported coal-fired energy, starting in 2030.

Steve Corson, spokesman for PGE, said the program looks consistent with the principles that Brown laid out in November, which emphasized achieving carbon reduction goals while maintaining affordable electricity rates.

"The goal here is to incorporate a mechanism that protects customers from unnecessary costs and still incents us to reduce carbon emissions, that's what the direct allocation of allowances is for," Corson said.

Bob Gravely, spokesman for PacifiCorp, said the utility was still reviewing the bill.

"We believe that there may be a path forward that aligns with Oregon's electricity sector policies and we look forward to continued engagement," Gravely said in an email.

The climate action program concept is still in its legislative infancy and was scheduled to get its first reading in the Joint Committee on Carbon Reduction on Feb. 1.

With utilities and emissions-heavy industries getting direct allowances through 2030, the sticking point with the bill may come from environmental groups that could argue it doesn't lower emissions fast enough, and from concerns from rural Republicans worried about impacts on fuel costs.

"A lot of groups were really excited about the huge flow of revenue from the auctions," the lobbyist said. "But it's hard to imagine that's going to happen.

It's going to be hard to have a lot of revenue from the bill if there's not much auction activity until 2030."

Zach Baker, Oregon policy manager for Climate Solutions, applauded the program's 2035 and 2050 emissions reduction targets.

Baker was concerned with the number of free allowances given to utilities and emissions-intensive, trade exposed business. "If you give away more allowances, there's less money for investment," he said.

"We want to minimize the free allowances, but we also want to have PUC oversight in how those direct allowances [to utilities] are used to lower GHG emissions, help with energy assistance, and with projects that will benefit all of Oregon," he said.

Western U.S. showcases entire spectrum of RPS legislation, Adam Wilson - SNL

The western United States, when it comes to renewable portfolio standards, is nothing if not inconsistent. California and Hawaii are well-known for having the requirement of 100% of their generation eventually coming from renewables. On the other end of the spectrum, states such as Wyoming and Idaho have no renewable requirements and little to no renewable legislation of any kind in place. Despite this wide spectrum of renewable policy, the region is fairly consistent in that wind and solar energy, with only a couple of exceptions, has had a lot of success. This brings up the question: how important are state-level renewable energy policies in driving renewable installation?

California signed SB 100 in September 2018. It requires utilities to source 100% of their electricity from carbon-free generation by 2045 and is enforced by the California Public Utilities Commission. As their renewable portfolio standards legislation suggests, California has been very aggressive in installing utility-scale wind and solar generation. Over 17,000 MW is installed as of 2018 and another 12,000 MWise estimated to come online between 2019 and 2025. No other state in the West comes close in terms of current and future wind and solar capacity.

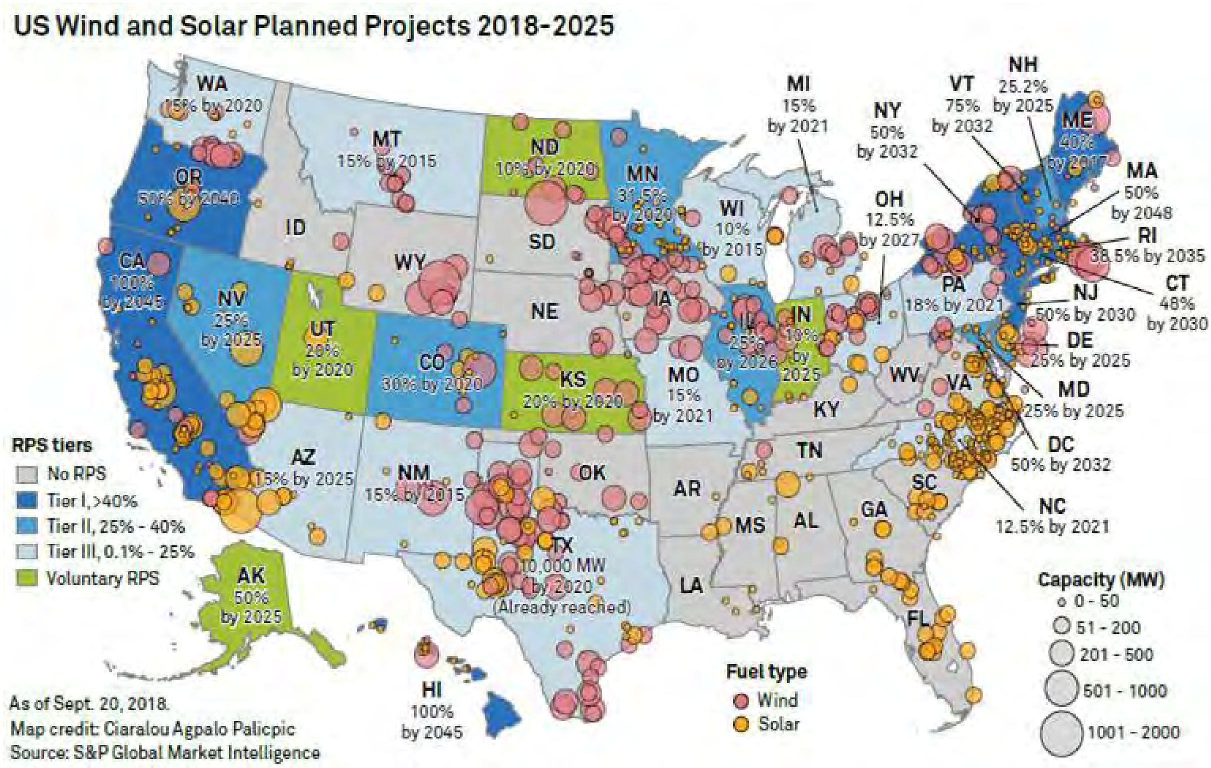
Wyoming, on the other hand, has no RPS in place and no other state-level policies in place that would drive utility-scale renewable installation. In fact, in early 2017, state lawmakers proposed a bill that would have required 100% of electricity to come from nonrenewable generation by 2019, essentially the opposite of an RPS. Despite this lack of support for renewable generation in the state, almost 1,500 MW of wind power has been installed in the state and 10,000 MW of wind capacity is in the pipeline. While some of these projects are still in early planning and may not come to fruition, wind energy has a distinct footprint in the state.

These two examples paint an interesting picture of the multitude of drivers for renewable energy in the country. Costs of both wind and solar have dropped significantly over the last 20 years and are now competitive with most conventional generation. This is especially true in areas with strong average wind speeds and/or abundant insolation for solar photovoltaic. Wyoming is proving that low-cost renewable assets built in areas with such conditions can overcome the lack of incentive/requirement programs at the state level.

This showcases the maturity of the renewables market in the U.S. Historically, all three of those conditions were necessary for wind and solar power to be economical. Now that low costs are fairly ubiquitous, a state only needs strong wind or solar resources or aggressive state programs such as an RPS to drive deployment. It does not need both.

The impact of the federal investment tax credit and production tax credit on the current and near-term market should not be ignored, however. These federal incentives have been a major driver for wind and solar installations since they were implemented. The phase-out of these incentives is underway. The investment tax credit for wind expires by the end of 2020 and the credit for solar settles at 10% by the end of 2023. Installation rates of wind and solar will likely dip once these credits expire, but it will mainly be due to the massive number of projects that began construction to maximize these incentives. The fact remains that wind and solar, installed in the

appropriate regions, will be easily justifiable both financially and environmentally.



Arizona has a mandatory RPS, but the requirement is only 15% renewable generation by 2025, and a bill that would have increased it to 50% was easily voted down in November 2018. Yet because the state boasts some of the best solar resources in the entire country, over 2,200 MW of solar capacity has been installed in the state, and another 2,700 MW is estimated to come online by 2025.

It is clear that as long as the state's climate favors renewable generation, it is an economical option even without strong incentives. At some point, however, state drivers are still needed. If a state wants to make a statement to go 100% renewable generation in efforts to reduce carbon emissions, utilities are still not likely to do so on their own, and thus legislation such as California's SB100 must come into play.

Coal’s Future Dominates Start of Montana Legislative Session, Dan Catchpole – Clearing Up

Uncertainty about coal's future was the big issue hanging over Montana legislators as the 2019 session started Jan. 7.

How it plays out in the corning weeks could determine what other energy legislation makes it to Gov. Steve Bullock's desk.

The state's coal industry-its mines and power plants-have provided steady jobs for generations of Montanans and been a critical piece of the state's overall economy. However, coal has been under assault for environmental and economic reasons in recent years.

It now faces seemingly existential threats from efforts in Washington and Oregon to eliminate fossil-fuel generation and the bankruptcy filing by the owner of the mine supplying the Colstrip plant.

State Sen. Duane Ankney (R-Colstrip), a longtime advocate for the embattled industry and a resident of Colstrip, has not given up hope for coal's future, but he acknowledges the industry faces severe challenges ahead.

Lawmakers are discussing what can be done to ensure Colstrip can get competitively priced coal to keep its 2,200 MW of generation on line, the Republican told Clearing Up. "We're taking a run at it on several different levels. I'm not at liberty to go into details."

Westmoreland, the Colorado company that owns Rosebud, the mine that supplies Colstrip, filed for bankruptcy and in January offered a plan to have

its creditors take control of the possessions of the company, including the Rosebud Mine.

While financial stakeholders and attorneys sort through the wreckage left in the wake of Westmoreland's collapse, Ankney is anxious for what that means for Colstrip' s operations now.

"We've got a lot of lawyers out there," he said, "and they know about as much about running a coal plant as nothing. " Ankney, an influential state lawmaker and head of the Senate's Energy and Telecommunications Committee, said he wants to ensure the Rosebud Mine is "operating in the best interest of the state," and not jacking up prices for Colstrip to pay off far-away creditors.

"Of course, you can't tell people how to run their business," he said.

However, fuel costs could be put under the Montana PSC's purview, he said.

That option could get enough support to pass through the Legislature, Ankney said.

The Colstrip lawmaker introduced Senate Bill 191 to allow counties to establish trust funds to use when coal mining or generation in that county has ceased. The bill begins with language that might indicate a change in Ankney's perspective on coal's future. It states, "Whereas, there is a need for counties to be able to prepare for reductions in coal mining and coal-fired electric generation . . ."

However, Ankney said, he is as confident as ever that Montana coal can find new markets in Asia if it can be moved through West Coast ports.

Nonetheless, it could signal a shift for future energy policy discussions, said Brian Fadie, an analyst at the Montana Environmental Information Center. "Just having that language in that bill is a big step."

Lawmakers are also considering a bill to allow the state to acquire the Colstrip plant.

However, the measure, House Bill 203, received little support during its Jan. 21 hearing in the House Energy, Technology and Federal Regulations Committee. Even the sponsor, Rep. Rod Garcia (R-South Billings), doesn't support the central point of the bill-public ownership of a private power plant.

His support comes from his concern for keeping paychecks coming to constituents who could otherwise be out of work, he told the committee. "My intention is just to keep this open, running, keeping the economy strong in Montana. That's it."

There are several placeholder bills dealing with coal, with vague titles, which provide legislators wide latitude to amend them as the session progresses. Draft bills typically have to be introduced by mid-February in order to ensure enough time for hearings, required readings and votes before the deadline when they must move to the other chamber or die. A bill can still be amended so long as the changes fit within its title.

HB 22 sets QF contract lengths at 25 years. The bill would undo the symmetry clause established in 2017 by the Montana PSC. Extending QF contract durations to either 20 or 25 years had broad support from members of the Energy and Telecommunications Interim Committee, which meets every other year to consider and prepare proposed legislation.

Rep. Daniel Zolnikov (R-Billings) is working on a sweeping reform bill to make resource procurement for investor-owned utilities more competitive and transparent. The bill has not been introduced yet, but a draft provided to Clearing Up shows an ambitious effort to overhaul the process.

If passed, it would require IOUs to have "a broad-based advisory committee to review, evaluate and make recommendations on technical, economic, environmental and policy issues related to a utility's electricity system." It would also task the PSC with establishing "energy savings and peak demand reduction goals" for each IOU.

The heart of the draft would be to change the process so that the utility bids for capacity, which any resource provider can compete to win. So, a natural gas-fired plant and demand side management could, theoretically, go head-to-head. The PSC would appoint an independent observer to review and report on the process.

"I don't care what [resource] they end up selecting, as long as its competitive," Zolnikov said in an interview.

"Right now, I'd say process is murky, and that does nobody any good in the long term," he said.

Zolnikov has already managed to pass several far-reaching bills (mostly dealing with privacy laws) during his time in the statehouse. He chairs the Energy, Telecommunications and Federal Relations Committee.

He is optimistic that he can pass his reform bill, but it is not an easy lift.

"Do I think there's a route? Of course," he said, but conceded, "I have to figure out that way."

NorthWestern Energy likely would oppose the bill if it is introduced.

The bill is fatally flawed, according to David Hoffman, NorthWestern Energy's head of government affairs.

"It doesn't recognize the difference between power and capacity," he said.

Legislators might like the sound of a more public process than NWE's current approach with a technical committee, but equating power and capacity in resource procurement would hurt Montana ratepayers, he said.

"In lot of ways, it's about educating legislators about what the utility needs," Hoffman said. Sweeping reforms are proposed in "every session it seems, but we're able to kill them or work something out," he said.

While Zolnikov and NWE might clash over resource procurement, the two collaborated to draft HB 267, which strengthens net metering customers' privacy.

The session has been slow for energy bills so far, with fewer hearings than usual, Hoffman said.

He chalked it up to NorthWestern's general rate case with the PSC, and the governor's focus on tackling infrastructure improvement and Medicaid expansion.

The bill that could most affect NorthWestern likely would be HB 32, which changes how the state pays for fighting invasive aquatic species, Hoffman said.

NWE would be affected as a dam owner. In 2017, lawmakers passed legislation that included hydropower facility owners as funders. Hoffman said NWE paid about $3 million over two years.

Legislators are considering raising the money from higher user fees and from the general fund.

"Well there's the rub," Hoffman said. "The governor and legislative leaders are saying there is no extra general fund money available."

Idaho lawmakers have gathered in Boise, but energy is not a subject of concern. No bills have been introduced affecting the electric utility sector, and none are expected, said Rep. John Vander Woude (R-Nampa), who chairs the House Environment, Energy and Technology Committee.

Colstrip Power Plant Threatened by Westmoreland Bankruptcy, Aaron Larson – Power Executive

The Colstrip Power Plant, a four-unit, 2,094-MW coal-fired station located about 100 miles east of Billings, Montana, could see its coal supply contract nullified as a result of Westmoreland Coal Co.'s Chapter 11 bankruptcy reorganization.

Westmoreland operates the 25,000-acre Rosebud coal mine, among others. Rosebud is adjacent to the Colstrip plant and supplies almost all of its production to the station. According to Westmoreland, that amounts to about 10 million to 13 million tons per year.

Westmoreland filed for bankruptcy on Oct. 9, 2018. Earlier this month, the company solicited offers for the purchase of substantially all of its assets, but no qualified bids were received, other than the minimum bid from its creditors.

Coal mining operations have been hard hit by shrinking demand from the power generation industry. According to the U.S. Energy Information Administration, coal production has fallen by more than one-third since 2008 when production peaked. The number of active coal mines has decreased by more than half, from 1,435 mines in 2008 to 671 mines in 2017. However, most of the mine closures have been in the Appalachian region, not in the Powder River Basin (southeast Montana and northeast Wyoming) where large surface mines account for more than 40% of total U.S. production.

The Colstrip plant employs about 360 people and is operated by Talen Montana LLC. The facility is co-owned by Talen, Puget Sound Energy Inc. (PSE), Portland General Electric Co., Avista Corp., PacifiCorp, and NorthWestern Energy.

Talen filed an objection with the bankruptcy court on Jan. 25 over Westmoreland's Chapter 11 plan, which would nullify Colstrip's fuel contracts. The document says Westmoreland is attempting to "squeeze" the plant "for greater and greater profits." According to the filing, the current fuel contracts "guarantee" profitability for Westmoreland because they are cost-plus agreements under which the plant pays the annual costs of mining operations, a return on capital investment, and a per-ton profit fee.

The *Billings Gazette* reported that NorthWestern Energy told the bankruptcy court, "If the Court allows [Westmoreland] to reject the Coal Supply Agreement, the Colstrip Complex will cease operation, and the Units will shut down and cease generating electricity in the middle of the Montana winter. The Colstrip Co-Owners will not be able to replace the coal supply right away, and the units will close."

"The Rosebud Mine is the only viable source of fuel for the Colstrip units," PSE's Grant Ringel was quoted to have said. "The Colstrip units are under strong economic pressure from other sources of electric generation, especially natural gas. Anything that raises costs for Colstrip further weakens their competitiveness," Ringel reportedly said.

The Colstrip plant has been operating under financial pressure for some time. Talen and PSE, which are joint owners of Units 1 and 2, reached an agreement in July 2016 to retire the two units by July 2022. Although the deal was made to settle a lawsuit alleging violations of the Clean Air Act, PSE President and CEO Kimberly Harris alluded to difficult economics when she said at the time, "This agreement provides certainty for addressing grievous pollution issues and gives the two units six years to go offline, although the market may prove less tolerant of that length of time." A Talen lobbyist in March 2017 told state legislators that the plant was losing about $30 million annually.

"Westmoreland's most recent offer to the Colstrip owners would very likely make operation of Colstrip Units 3 and 4 uneconomic for not only Talen Montana but all of the fellow Colstrip owners," Talen Energy's Taryne Williams was quoted by the *Gazette* as saying. "Additionally, while at the present time, there has been no decision to shut down Units 1 and 2 prior to the previously announced closure date of July 1, 2022, we continue to experience financial challenges related to keeping the units open," Williams reportedly added.

Last week, legislation was introduced by state Rep. Rodney Garcia (R-Billings) that would authorize the State of Montana to issue revenue bonds for the financing and purchase of coal-fired generation facilities. Garcia was quoted in *The Montana Standard*, a Butte-based daily newspaper, to have told the House Federal Regulations, Energy, and Telecommunications Committee, "My intention is just keep this [Colstrip power plant] open, running, keeping the economy strong in Montana. That's it."

However, several groups, including the Montana Chamber of Commerce, the Montana Taxpayers Association, and the Montana Environmental Information Center, oppose the legislation, so it could face an uphill battle to become law. Meanwhile, four of the plant's owners are reportedly planning to move away from coal power within the next 10 years. In May 2016, Talen told

the other owners that it intended to exit as the plant operator by May 2018 because it was losing too much money, but it reversed course in August 2017 and continues to operate the plant today.

elly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 02/14/2019 03:02:38 PM

To: Aldis.Raisters@gapac.com; kwilson@legadv.com; kristin.b.marshall@boeing.com; lori@lorievans.us; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; mruckwardt@schn.com; mingon@ohsu.edu; todd.wiseman@solvay.com; tom@richlandpaper.com; jeff.steed@northwesthardwoods.com; mary mccordic@shell.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; Ted@cmsnaturalgas com; teresa.acosta@calpinesolutions.com; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Amy Beck <amy.beck2@boeing.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Brad Beavers <bbeavers@timberproducts.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@nippondynawave.com>; Bruce Martin <bruce.martin@westrock.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Charley Hathaway <charley.hathaway@nwpsllc.com>; Charley <[redacted]>; Chris Horn <chris_h@columbiasteel.com>; Clifford Barr <Clifford.G.Barr@tsocorp.com>; Courtney Smith <courtney.smith@shell.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Dan Coyne <dancoyne@coynenet.com>; David Barge <DABarge@marathonpetroleum.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Tobin <DavidTobin@boisepaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Fawn Barrie <fbarrie@legadv.com>; Gary Londo <gary.j.londo@boeing.com>; Graham Bailey <graham.bailey@nippondynawave.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Ponderay <JAMIN.SIMMONS@resolutefp.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Keith Warner <keith.c.warner@boeing.com>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Ma <Mark.Brown@teck.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Nelson <pacounsel@pacounsel.rog>; Mark Steele <Mark.Steele@norpac.com>; Marty Sedler <marty.sedler@intel.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@rocktenn.com>; Michael Kuhn <mike.kuhn@westrock.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Kaiser, Nick <Nick.Kaiser@nippondynawave.com>; Noel Mak <Noel.Mak@atimetals.com>; Pat Ealy <pat.ealy@akzonobel.com>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Pat Lydon <PLydon@lhs.org>; Pat Ortiz <pat.ortiz@westrock.com>; Paul Langley; Phil Pesek <Phil.Pesek@teck.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Samuel Liebelt <samuel.liebelt@westrock.com>; Sandi Swarthout <sswarthout@capconn.net>; Scott, Edgar <Edgar.Scott@kaiseraluminum.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <SRHawley@marathonpetroleum.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steven Castracane <steven.castracane@linde.com>; Thomas Rozwood <tom.rozwod@norpacpaper.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Yarborough <Tom.yarborough@weyerhaeuser.com>; Tony Hardenbrook; Tyler Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Ben Byman <Ben.Byman@lvpnp.com>; Ben Byman <ben.byman@weyerhaeuser.com>; Bill Gilmore <billmg@penwool.com>; Clay Riding <clayr@nw-iw.com>; Dave Rickman <dave.rickman@kaisertwd.com>; David Hawk <[redacted]; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Bryck (US), Drew M <drew.m.bryck@boeing.com>; Hendricksen, Don <[redacted]>; JaDPrice <JaDPrice@gapac.com>; Jared Sommer <sommerj@byui.edu>; Jeff Steed <jeff.steed@northwesthardswoods.com>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kristine Dippold <Kristine.A.Dippold@boeing.com>; Kyle Williams <williamsk@byui.edu>; Laura Jane Schaefer <schaefel@ohsu.edu>; Nick Avenetti <nick@perlite.com>; Phil Foss <phil.foss@onsemi.com>; Rick Stricker <rstricker@baf.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Steve O'Brien <sobrien@baf.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Wes Hill <Wes.Hill@gapac.com>; Chuck Gates <[redacted]; Nancy Holbrook <Nancy.Holbrook@bp.com>; Nancy Hollbrook <Nancy.Richardson@bp.com>; Robert Pierce <robert.pierce@shell.com>

Subject: AWEC Energy Brief

AWEC

This energy brief is provided by Energy Strategies

on behalf of the Alliance of Western Energy Consumers.

http://www.awec.solutions

Avista to file rate cases in Washington, Idaho, Oregon in H1, Selene Balasta -

SNL

Following the termination of a planned acquisition of the company, Avista Corp. intends to file general rate cases in Washington, Idaho and Oregon in the first half with effective dates in early 2020.

"Due in part to the ongoing regulatory proceedings for the Hydro One Ltd. transaction for the past 18 months, we elected not to file general rate cases in '18, so the commissions could focus and their staff could focus on the merger proceedings," Avista CFO Mark Thies said Feb. 8 on the company's fourth-quarter 2018 earnings conference call.

With the delay in rate case filings, the company expects to incur regulatory lag through 2019 to the end of 2021.

Ontario utility Hydro One and Spokane, Wash.-headquartered Avista first announced their proposed combination in July 2017 and sought approval from regulators in five states. On Jan. 23, the companies terminated the plan after Washington and Idaho regulatory agencies rejected it.

During the merger proceedings in 2017 and 2018, Avista said it continued to invest in utility infrastructure but has not recovered the costs for its investments.

"Going forward, we'll continue to strive to reduce the timing lag and more closely align our earned returns with those authorized by 2022," Thies said.

Avista will use 2019 as a base year, with an expected earnings growth rate of 9% to 10% from 2020 to 2022 and a 4% to 5% growth rate beyond 2022, assuming favorable rate case outcomes in each of the company's jurisdictions.

Avista reported fourth-quarter 2018 net income attributable to shareholders of $45.8 million, or 70 cents per share, compared to $27.6 million, or 42 cents per share, in the fourth quarter of 2017.

The company also initiated its 2019 earnings guidance range of $2.78 per share to $2.98 per share, which includes $1.01 per share for the $103 million termination fee received from Hydro One in January and the payment of remaining transaction costs.

Avista expects to issue approximately $165 million of long-term debt and up to $50 million of equity to refinance maturing long-term debt, fund planned capital expenditures and maintain an appropriate capital

structure.

BPA Kicks Off New Regional Planning Organization Outreach, Rick Adair – Clearing Up

BPA on Feb. 5 provided an update on the formation of a new group to provide coordinated regional transmission planning that will replace ColumbiaGrid and the Northern Tier Transmission Group.

The two current regional planning organizations have targeted Jan. 1, 2020, for implementing the new RPO, which will serve their combined memberships.

The tight implementation schedule includes utilities developing draft tariff language during the first quarter of 2019 that will be used to revise their Attachment Ks, which describe their transmission planning processes per FERC Order 890, and then filing the language with FERC by March 29.

Stakeholder engagement by BPA during the RPO development will include quarterly progress reports, outreach before and during the FERC proceeding, and during Bonneville' s terms and conditions proceeding.

Ravi Aggarwal, BPA manager and senior electrical engineer, noted in a presentation that the participants are seeking the new RPO, named NorthernGrid, because it would provide a broader footprint based on expanded membership, which would include eight entities from ColumbiaGrid and seven from NTTG.

This would also provide enhanced transmission coordination and improved efficiency in the planning process by using a common set of data and assumptions, and eliminating duplicative efforts for regional planning, he said.

In addition, the expanded membership would provide greater cost-sharing and reduced exposure to cost volatility.

A key difference between the three RPOs is that ColumbiaGrid is a nonprofit, while NTTG has an association structure made up of its members, as would NorthernGrid.

Their similarities include an "open and transparent coordinated transmission planning process," and a two-year planning cycle to develop and adopt the regional plan. The two-year cycle would develop a draft regional plan during the first year, and review and finalize during the second year.

All three allow for participation by both jurisdictional (regulated utilities) and nonjurisdictional entities, which facilitates compliance with FERC requirements, including Order 890 and Order 1000.

Nonjurisdictional participation in the FERC Order 1000 cost-allocation process would be on a voluntary basis.

Order 1000, issued in 2011, reformed FERC's electric transmission planning and cost allocation requirements for jurisdictionals, and was based on the earlier reforms of Order 890.

All members would participate in the members and planning committees, Aggarwal said. Jurisdictional members would additionally participate in the cost allocation committee-which addresses FERC Order 1000 cost allocation requirements-with input from state transmission planning advisors.

Day-to-day activities will be managed by a project coordinator, which will be a third-party vendor.

Aggarwal said the scoping effort to create NorthernGrid began with discussions in 2015. A letter of commitment signed by participant top executives in 2018 initiated efforts to draft governance documents.

The governing documents include various agreements, charters, and tariff language.

At BPA's recent quarterly business review on Jan. 29, Richard Shaheen, senior VP of Transmission Services, noted that the first drafts of the RPO funding and planning agreements had been completed, and that work was underway on a draft agreement for the RPO vendor.

He also noted that jurisdictionals are expected to provide FERC staff an update of their RPO efforts in late February.

PSE, Avista Ask to Delay 2019 IRP Filings Until Legislative Sessions End, Steve Ernst – Clearing Up

Puget Sound Energy and Avista have asked state regulators for permission to delay filing their 2019 integrated resource plans until several major energy policy debates play out in legislative sessions around the region.

Avista asked the Idaho PUC on Jan. 31 for a six-month extension from its Aug. 31 deadline to file its 2019 IRP, noting that there are numerous legislative proposals in Washington, Montana and Oregon "that will

have major impacts on the regional electric market."

PSE would like to delay filing its IRP from July 2019 to January 2020, according to a Feb. 4 letter sent to the Washington UTC.

"There is significant activity in the Washington State legislature pertaining to reducing carbon emissions from the utility sector, and new laws are expected to be passed," the utility said in its letter to Washington regulators. "Under the current schedule, new laws passed this spring could not be incorporated into PSE's 2019 IRP. Given the uncertain outcome of this process, it would be in the public interest to pause development of the 2019 IRP and resume once legislative outcomes are known this spring."

Senate Bill 5116 would require electric utilities to phase out coal-fired generation by 2025, including imported power. It would mandate that all retail sale of electricity be greenhouse gas-neutral by 2030; and eliminate all fossil-fueled generation by 2045.

The bill, as it stands, could require PSE to rebuild the bulk of its generating portfolio.

SB 5116 could potentially require PSE to shed some 677 MW of coal-fired generation from Colstrip, while also replacing 1,905 MW of natural gas-fired generation (1,293 MW from three baseload plants and 612 MW from three peaking units).

Another 300 MW of Puget' s Centralia transition coal contract expires in 2024 before the deadline for shedding coal power, and just ahead of TransAlta's decommissioning of the plant.

WUTC has also recommended that PSE rely less on market purchases to meet its capacity needs. The company now goes to the market for about 1,600 MW, according to the 2017 IRP.

"Such adjustment to the schedule will ensure PSE can begin the planning process under new state policies, rather than analyzing a host of scenarios/sensitivities that may be irrelevant in a few months, and miss the opportunity to begin implementing those policies sooner rather than later," the utility said.

In addition to SB 5116, Avista is closely watching the debate over HB 1113, which would align Washington's greenhouse gas reduction rates with the Paris climate

accord. The utility also told Idaho regulators that "a comprehensive cap-and-trade proposal is also expected to be introduced in Washington soon."

Oregon's proposed cap-and-trade bill [LC 894] would also impact Avista's Coyote Springs 2 generating facility, the utility said.

"With all of these legislative uncertainties, IRP modeling at this time would be premature," Avista said. "The impact of such legislation could fundamentally change the regional (and Avista's) resource mix, and therefore have an impact on Avista's Idaho customers. Thus, to the extent any of the potential legislation is enacted, new models would need to be run to account for the actual impact of such legislation."

Colstrip legislator plans DC trip to save power plant, Tom Lutey – Billings Gazette

Montana legislator Duane Ankney will meet a member of the Trump administration next month in an attempt to save Colstrip.

The Republican state senator from Colstrip will be in Washington, D.C., on March 5, according to a press release issued Wednesday.

“I want to thank Senator Steve Daines for helping make this possible,” Ankney said in the press release. “Colstrip is on the radar of President Trump and his administration. I know how important clean coal, jobs, and Montana are to President Trump. I have every reason to be confident that our meeting will be successful.”

Public records for NorthWestern show that 22 percent of the power generated by the company comes from Colstrip or the Dave Gates gas-fired power plant. Most of its power is generated by hydroelectric dams. A small portion is generated by wind farms. Another 18 percent of the electricty NorthWestern uses comes from a mix of third party sources, including portions of Colstrip owned by stakeholder Talen Energy.

Last August, the Trump EPA rolled out a new set of coal-friendly rules, replacing Obama policies. The “Affordable Clean Energy Rule” allows states to ease up on pollution regulations when enforcing the rules might result in costly upgrades for coal-fired power plants. Emissions were still expected to decline over time.

Colstrip has four generating units. The oldest

two are scheduled for retirement no later than 2022 as part of a legal settlement with the Sierra Club and Montana Environmental Information Center over air pollution.

Its newer units went offline in late June after failing to clear federal Mercury and Air Toxics Standards, or MATS. Afterward, they burned out of compliance for 77 days, according to the state Department of Environmental Quality.

The power plant's namesake community of 2,300 people has seen the life of its power plant challenged as utilities in Oregon and Washington face political pressure to abandon coal. The Westmoreland Coal Co. mine that feeds the power plant is in bankruptcy proceedings.

Portland General, NextEra partner to build 380-MW integrated renewable facility, Nephele Kirong - SNL

Portland General Electric Co. is partnering with NextEra Energy Resources LLC to build a 380-MW integrated renewable facility in Morrow County, Ore.

The Wheatridge facility will feature 300 MW of wind generation, 50 MW of solar generation and 30 MW of battery storage. "Wheatridge will be a model for integrating renewable generation and storage to cost-effectively reduce emissions while maintaining a reliable grid," Portland General President and CEO Maria Pope said in a Feb. 13 news release.

The companies expects the wind component of the facility to be operational by December 2020 to qualify for the federal production tax credit at the 100% level. Construction of the solar and battery components is planned for 2021 and will qualify for the for the federal investment tax credit.

The Portland, Ore.-based company will own 100 MW of the wind project and expects to invest $160 million for its portion. A NextEra Energy Resources subsidiary will own the balance of the project and sell the output to Portland General under 30-year power purchase agreements.

The project was the prevailing bid in response to PGE's renewable proposal request in May 2018. The agreements between the company and the NextEnergy Resources subsidiary will be subject to prudency review by the Oregon Public Utility Commission and approval by the NextEra Energy Inc. management.

Wheatridge was originally a 500-MW wind project when NextEra Energy Resources acquired it in 2017. The Oregon Energy Facility Siting Council approved the wind project in April 2017. The site certificate called for construction to start by May 24, 2020, and for its completion by May 24, 2023.

According to the siting council's website, NextEra Energy Resources requested an amendment to the site certificate to include a 150-MW photovoltaic solar energy system and 41 distributed energy storage system sites. The company also asked to extend the construction commencement deadline to Dec. 31, 2023.

PacifiCorp Asks to Bypass Oregon Bidding Rules to Buy Wind Project, Steve Ernst – Clearing Up

PacifiCorp has asked the Oregon PUC for permission to bypass the state's competitive bidding rules to acquire NextEra's 120 MW expansion of the Cedar Springs Wind Facility in Wyoming.

In a Feb. 6 letter to the commission, the utility says "it has time-limited opportunity to acquire a resource of unique value to PacifiCorp's customers."

Executing the power purchase agreement will enable NextEra to finalize certain contractual arrangements required to achieve a commercial-operations date of no later than Dec. 31, 2020, the utility said.

"Failure to execute the Cedar Springs III PPA within this time frame risks forgoing the opportunity to secure a low-cost wind resource that will provide a unique value for customers," the utility told regulators.

Cedar Springs III is an expansion of the 400 MW Cedar Springs Wind Facility, located in Converse County, Wyo., which is already under contract to PacifiCorp. The utility signed a PPA with NextEra in February 2018 after the developer bid the project into the utility's RFP. PacifiCorp owns and operates half of the project, and contracts for the remainder with NextEra.

The opportunity to enter into the Cedar Springs III PPA evolved over a very compressed timeline, beginning in early November 2018 and concluding with negotiation of final terms in late January 2019, the utility told OPUC.

"The entire process from initial discussions

to the negotiation of final terms for the PPA occurred within three months. Additionally, for NextEra to achieve a construction schedule that will qualify for 100 percent of the federal PTCs, a PPA must be executed at this time," the utility said.

PacifiCorp told Oregon regulators that in order to meet the project's Dec. 31, 2020, commercial operations date, it would not have time to issue an RFP. The state generally requires utilities to release an RFP for any project over 100 MW.

"An RFP process would have taken many months to complete and would have exceeded the timeline necessary to capture the unique value of this opportunity, " the utility said.

The plea for speed was a common theme through- out PacifiCorp's 2017 integrated resource plan and a wind-resource request for proposals called out in the plan as an action item.

The utility successfully argued that it needed to release the RFP quickly to capture the fading production tax credits to save customers money, and released it before OPUC acknowledged the utility's 2017 IRP.

Subsequently, OPUC and its staff disliked the company's 2018 RFP, which staff said "could not be described as competitive," and in May the commission declined to acknowledge the RFP's shortlist.

OPUC reluctantly acknowledged the company's 2017 IRP, saying PacifiCorp failed to show that the proposed of resource acquisitions were needed and that the main driver of the IRP's action plan was "economic opportunity" presented by the loss of the wind production tax credit.

PacifiCorp's $3.5-billion Energy Vision 2020 plan initially called for adding 1,150 MW of new wind resources in Wyoming by the end of 2020, repowering 999 MW of wind turbines in Washington and Oregon and building a new 140-mile section of the Gateway West transmission segment in Wyoming to move the new wind generation west.

PacifiCorp acquired the 400-MW Cedar Springs Wind Facility as part of its 2018 RFP, along with two other Wyoming wind projects; the 500-MW TB Flats I and II, and the 250-MW Ekola Flats project. Invenergy's 161-MW Uinta project also initially made the short list but was later removed after regulators in Oregon and Wyoming

questioned the prudency of the project.

NorthWestern, MPSC Clash Over Regulator's Role in Rate Case, Dan Catchpole – Clearing Up

NorthWestern Energy and the Montana PSC are butting heads over the regulator's authority to enter evidence into a general rate case when it then will determine the outcome.

The utility filed the rate case in late September and is asking for a revenue increase of more than $32 million [D2018.2 .12].

In November, the utility objected to the commission's ability to make data requests in the proceeding. "The Commission must conduct this proceeding as a contested case proceeding under [the Montana Administrative Procedures Act (MAPA)] and allow the parties to present evidence," NorthWestern argued in its filing. "The Commission's role is to evaluate the evidence. The constitutional requirements for a fair hearing do not allow the Commission to both introduce the evidence as a party and evaluate the evidence as the judge."

In early December, the commissioners voted 5-0 to reject the argument. In their order, they cited the decades-long history behind the PSC's ability to both Commission's role is to evaluate the evidence. The constitutional requirements for a fair hearing do not allow the Commission to both introduce the evidence as a party and evaluate the evidence as the judge."

In early December, the commissioners voted 5-0 to reject the argument. In their order, they cited the decades-long history behind the PSC's ability to both request data and evaluate it. The order did note that state district courts have expressed reservations with the PSC straddling roles typically kept separate in other legal proceedings.

"Notwithstanding this skepticism, the Commission's issuance of discovery is a long-standing practice," the PSC ruled.

NorthWestern contested the order in a Dec. 18 filing. The utility argued, "Multiple district court decisions *this* year involving *this* Commission support NorthWestern's legal analysis regarding this issue." (Emphasis in original.)

NWE urged the PSC to "conclude that it will

not pursue discovery in this docket," in its Dec. 18 filing.

The utility argued that the commission had used semantics to sidestep the question of its conflicting roles in the general rate case. In litigation, parties involved in the case can seek information from other involved parties as part of discovery. That information makes up the evidentiary record of the trial, the utility noted.

"Recognizing that discovery is limited to the parties, the Commission now describes the procedure at issue in this docket as mere 'information collecting,'" NorthWestern said in its filing. "Regardless of the Commission's verbal wit, when the Commission compels NorthWestern to respond to requests for information and subsequently places that information in the evidentiary record, the Commission has engaged in discovery, i.e. 'if it walks like a duck, swims like a duck, and quacks like a duck, it's a duck." '

Based on the commission's own rules, the PSC cannot shape the evidentiary record of a contested case and "then make a determination based on evidence that it has pursued and introduced," NorthWestern argued.

The PSC should either not engage in discovery or separate its staff into separate advocacy and advisory divisions, NorthWestern said in its filing.

Unmoved by NWE's arguments, the PSC issued 268 data requests in early January.

NorthWestern responded a couple weeks later with an objection to the requests, calling for the commission to withdraw them. On Jan. 22, the utility filed a motion for oral argument that it can propose a resolution to its objection when the commissioners address it during a work session.

The PSC has not set a date for discussing NorthWestern's objection.

Washington Clean Energy Bills Clear House Energy Committee, Rick Adair – Clearing Up

The House version of Gov. Jay Inslee's clean energy bill cleared the Environment and Energy Committee Feb. 5 on a party-line vote, 6-3, with Rep. Richard DeBolt (R-Chehalis) making no recommendation.

The bill now passes to the House Finance Committee, where it is scheduled for a hearing on Feb. 12.

A substitute for the original House Bill 1211 ran a gauntlet of 18 amendments, with only four passing; nine failed, and another five were withdrawn. Sorting through the proposed changes in caucus and later in the open meeting pushed the proceeding 45 minutes past its scheduled end.

At its core, the bill phases out coal-fired electricity generation used in the state by 2025, even if imported from out of state, and eliminates all fossil-fueled generation by 2045. An intermediate mandate requires generation be carbon-neutral by 2030.

Among the changes is the requirement that customers going to the market must still meet the carbon-neutral and carbon-free mandates.

Another addition directs the state Commerce Department to adopt rules establishing how it will calculate the fuel mix for the BPA for the purposes of compliance with the bill' s three carbon mandates.

It also established source-specific multipliers for the $100 administrative penalty for each megawatt-hour of electric generation used to meet load that is not from a renewable resource or nonemitting electric generation.

The amended bill adds a process for waiving penalties and suspending standards if the reliability of the system is threatened, both for investor- and consumer-owned utilities.

Also moved out of committee was HB 1266, an alternative to HB 1211 sponsored by DeBolt, which was approved by unanimous vote.

DeBolt characterized his legislation as "using a carrot, rather than a stick, to encourage the transition to a clean energy future," and relying more on incentivized investments rather than monetary penalties for using noncom pliant generation.

The bill requires electric utilities to use clean energy resources to meet any new energy or capacity need for Washington retail electric customers beginning January 1, 2029, while at the same time allows the continued use of generation from emitting resources.

It also provides tax preferences for carbon reduction investments and for investments in renewable resource generation facilities.

The bill additionally changes the definition of "eligible renewable resource" under the Energy Independence Act to include

renewables located anywhere within the Western Interconnection; a utility's proportional share of generation from efficiency improvements to hydro projects marketed by BPA; and the environmental attributes, including RECs, from federal incremental electricity transferred to investor-owned utilities under BPA's Residential Exchange Program.

HB 1266 is also scheduled for a hearing in the Finance Committee on Feb. 14.

Western day-ahead electricity market favored by power-sector experts, Jeff Stanfield - SNL

The California ISO's proposal for a day-ahead market across the West would improve the economics of electricity provision and procurement across the region, experts said at a Washington, D.C., summit of state utility regulators.

The National Association of Regulatory Utility Commissioners hosted a panel on the future of power markets in the West on Feb. 11, as state commissions continue to grapple with implications of regional grid integration in the Western Interconnection.

The Western Energy Imbalance Market or EIM, which began operating in 2014, is now the only regional energy market operating in the western grid, but that may change over the next few years. While the EIM has realized nearly $565 million in economic benefits since 2014, according to an analysis from Western Resource Advocates, it involves no more than 10% of the energy transfers. This is done in the real-time market where the California ISO's software re-dispatches generation across the EIM at least cost every five minutes.

While the number of utilities joining the EIM has grown rapidly, the ISO in late 2017 proposed to make day-ahead market services available to EIM participants. The ISO runs a day-ahead market or DAM in California and is proposing to extend it to voluntary participants across the West as an "extended DAM" or EDAM.

The number of transactions in the DAM far exceeds those in the EIM, so the ISO's proposal has aroused much interest. Day-ahead commitment of generation resources would result in much more cost-effective dispatch that could provide significant savings for utilities and their customers, said Western Resource Advocates attorney

Jennifer Gardner.

However, unlike the EIM, which takes advantage of uncommitted or free transmission capacity, the day-ahead market would require a compensation method for the owners of transmission resources, so the benefits of a DAM would have to outweigh the cost of transmitting power across the power lines of multiple owners. Since 90% to 95% of energy transactions occur in the DAM, they involve a lot more power and transmission than the EIM.

That raises the question of how these market transactions will be regulated, and governance is a touchy subject in the West, where no interstate transmission organization exists. Energy procurement decisions would remain with local authorities, said Pam Sporborg, senior transmission and markets analyst for Portland General Electric Co., and utilities would not turn over operational control of their transmission assets. Participation in the EDAM would be totally voluntary.

A day-ahead market would not be equivalent to a regional transmission organization, proponents say. Resource adequacy decisions would continue to remain with the local utilities and regulators of each state. Regulators will want much more say in EDAM proceedings than they have had in the EIM, said Idaho Public Utilities Commissioner Kristine Raper, but overall an "evolutionary, not revolutionary change" to optimize the market through regional cooperation would be favorable in her view.

Efforts to organize the EDAM will involve a range of stakeholders to ensure that transmission-dependent utilities, independent power producers and other market participants benefit along with vertically integrated utilities, said former Montana Public Service Commissioner Travis Kavulla, who is now director of environmental and energy policy for R Street Institute, a nonprofit public policy research organization.

Proponents of the EDAM hope to implement it in 2022.

With rule for new coal plants, US EPA sees long-term future for coal-fired power, Zack Hale - SNL

The U.S. Environmental Protection Agency's proposal to ease Obama-era carbon

dioxide limits on new and modified coal-fired power plants reflects the view that coal will continue to generate a significant share of the world's electricity in the future, the agency's policy chief said Feb. 11.

"We can't deny the fact that coal will continue to be a key part of the energy mix both at home and abroad," EPA Associate Administrator of Policy Brittany Bolen said at the National Association of Regulatory Utility Commissioners' annual winter meeting in Washington, D.C.

The EPA in December 2018 proposed to revise an Obama-era rule for new and modified coal plants that set a CO2 emissions limit of 1,400 pounds/MWh on new and modified coal-fired power plants, effectively requiring plant operators to install CO2-reducing technology known as carbon capture and storage, or CCS. The EPA's new proposal would raise the emissions limit on large coal-fired generating units to 1,900 pounds/MWh and smaller units to 2,000 pounds/MWh while determining that the best system of CO2 emissions reduction for new coal-fired plant operators is to adopt the same technology already installed at the most efficient modern plants without CCS.

While acknowledging that CCS has been successfully deployed at the Petra Nova project in Fort Bend County, Texas, Bolen said the Trump administration's proposal recognizes that CCS "isn't ready for prime time" on a large scale.

The Obama-era rule for new and modified coal plants is a companion rule to the Clean Power Plan, which targeted CO2 emissions from existing fossil fuel-fired generators but was stayed by the U.S. Supreme Court and never took effect. Legal challenges to both rules are on hold with the U.S. Court of Appeals for the District of Columbia Circuit as the Trump EPA works to replace or revise them.

Bolen added that the EPA's proposal for new and modified power plants aims to spur investments in clean coal technology. "By encouraging cleaner coal here in the U.S., we will be able to encourage it worldwide," she said.

However, an EPA analysis of the proposal estimates the rule would not lead to the construction of any new coal plants. And U.S. coal plant retirements doubled in President Donald Trump's second year in office despite the administration's efforts to

aid the ailing coal industry.

The U.S. Energy Information Administration released a long-term outlook in January predicting that coal will provide 17% of the U.S. electricity generation in 2050 assuming that no CCS technology has been made mandatory. With no changes to current policy, climate-changing CO2 emissions from the U.S. power sector will fall by only 0.3% from 1,741 million metric tons of CO2 in 2018 to 1,587 million metric tons of CO2 by 2050, according to the EIA outlook. Meanwhile, coal's share in meeting global primary energy demand is expected to decline from 27% in 2018 to 22% in 2040, according to a 2018 outlook from the International Energy Agency.

Bolen delivered her Feb. 11 remarks after EPA Acting Administrator Andrew Wheeler unexpectedly canceled a planned appearance. A public hearing on the proposal for new and modified coal plants is scheduled for Feb. 19 and the deadline to submit written comments is March 18.

US EPA pushes back timeline for Clean Power Plan replacement following shutdown, Zack Hale - SNL

The Trump administration has pushed back the timeline for replacing the Obama-era Clean Power Plan in the wake of a record 35-day partial government shutdown, the U.S. Environmental Protection Agency's top lawyer said Feb. 7.

After initially aiming to finalize the Affordable Clean Energy, or ACE, rule by the end of March, the EPA now plans to issue the regulation sometime "in the second quarter of this year," EPA General Counsel Matthew Leopold said.

Leopold disclosed the revised regulatory timeline for one of the administration's signature rulemakings during a panel discussion co-hosted by the Environmental Law Institute and the American Law Institute in Washington, D.C., where he defended the proposal against lines of attack environmental groups likely will pursue once the rule is finalized.

Fellow panelist Vickie Patton, general counsel for the environmental group Earthjustice, challenged Leopold on the ACE rule's proposed determination that certain on-site power plant upgrades represent the best system of carbon dioxide emission reductions under the Clean Air

Act.

In contrast to the Clean Power Plan, which sought to reduce greenhouse gas emissions by assigning states bold CO2 reductions targets, the ACE rule would allow coal-fired power plants to make on-site heat-rate improvements without triggering the need to install modern pollution controls under a permitting program known as New Source Review, or NSR.

"This will reduce the burden on new construction projects and allow projects to go forward and create efficiency that some in the regulated community say have been held back because of New Source Review permitting requirements," Leopold explained.

The NSR program is triggered when any "significant modification" at a power plant or other large industrial facility is expected to result in an emissions increase on a tons-per-year basis, requiring facilities to install state-of-the-art pollution controls that can cost more than the proposed modification.

But Patton called the ACE rule's changes to the NSR permitting program "a mockery," noting that the EPA's own analysis shows the proposed replacement regulation would lead to 1,400 more deaths annually compared to the Clean Power Plan due to increased levels of air pollution.

Patton interrupted Leopold when he attempted to cite the EPA's estimate that CO2 emissions would decrease roughly 34% in 2030 under the ACE rule compared to 2005 levels. In fact, Patton said, virtually all of those CO2 emission reductions would occur without the rule in place as a result of the nation's continued shift away from coal-fired generation toward natural gas and renewables. "These standards will create a policy framework that will allow for pollution increases," she said.

"We don't deny that the market is heading this direction already, and a lot of the gains that have been made in CO2 reductions are the result of market-driven factors and we celebrate that," Leopold responded. Moreover, Leopold said, the Clean Air Act does not allow the EPA to "come in and play energy regulator on the entire grid" by influencing how different power generation resources are dispatched.

Patton also urged the Trump administration to ask the U.S. Court of Appeals for the District of Columbia Circuit to rule on

a stayed legal challengeto the Clean Power Plan, noting that many of the questions at issue now already were fully briefed and argued before the full court in September 2016.

But Leopold disagreed, saying, "Each EPA would like to litigate on its own record, and we're developing a whole new proposal and the D.C. Circuit has decided to allow that."

The matter ultimately will come down to whether the D.C. Circuit finds the Trump administration's efforts to repeal and replace the Clean Power Plan arbitrary and capricious, according to veteran environmental attorney John Cruden. Now a principal at the law firm Beveridge & Diamond PC, Cruden defended the Obama-era rule as head of the U.S. Justice Department's environmental division.

"The D.C. Circuit will pay way more attention to what the statute says, and are you working and operating within the statute," Cruden said in an interview on the sidelines of the event. Establishing a defensible administrative record also is key to surviving a legal challenge, he added, noting that the EPA is in the midst of responding to roughly half a million public comments. "You can actually win on the idea and lose when the record doesn't support it," he said.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 02/26/2019 07:51:45 PM

To: Aldis.Raisters@gapac.com; kwilson@legadv.com; kristin.b.marshall@boeing.com; lori@lorievans.us; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; mruckwardt@schn.com; mingon@ohsu.edu; todd.wiseman@solvay.com; tom@richlandpaper.com; Wes.Hill@gapac.com; mary.mccordic@shell com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; Ted@cmsnaturalgas com; teresa.acosta@calpinesolutions.com; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Amy Beck <amy.beck2@boeing.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Brad Beavers <bbeavers@timberproducts.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@nippondynawave.com>; Bruce Martin <bruce.martin@westrock.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Charley Hathaway <charley.hathaway@nwpsllc.com>; Charley <[redacted]>; Chris Horn <chris_h@columbiasteel.com>; Courtney Smith <courtney.smith@shell.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Dan Coyne <dancoyne@coynenet.com>; David Barge <DABarge@marathonpetroleum.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Tobin <DavidTobin@boisepaper.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Fawn Barrie <fbarrie@legadv.com>; Gary Londo <gary.j.londo@boeing.com>; Graham Bailey <graham.bailey@nippondynawave.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Ponderay <JAMIN.SIMMONS@resolutefp.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Keith Warner <keith.c.warner@boeing.com>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Ma <Mark.Brown@teck.com>; Mark Dunn <mark.dunn@simplot.com>; Mark Steele <steele@norpac.com>; Mark Steele <Mark.Steele@norpac.com>; Marland Turner <mlturner@marathonpetroleum.com>; Marty Sedler <marty.sedler@intel.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@rocktenn.com>; Michael Kuhn <mike.kuhn@westrock.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Kaiser, Nick <Nick.Kaiser@nippondynawave.com>; Noel Mak <Noel.Mak@atimetals.com>; Pat Ealy <pat.ealy@akzonobel.com>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Pat Lydon <PLydon@lhs.org>; Pat Ortiz <pat.ortiz@westrock.com>; Paul Langley; Phil Pesek <Phil.Pesek@teck.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Samuel Liebelt <samuel.liebelt@westrock.com>; Sandi Swarthout <sswarthout@capconn.net>; Scott, Edgar <Edgar.Scott@kaiseraluminum.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <SRHawley@marathonpetroleum.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steven Castracane <steven.castracane@linde.com>; Thomas Rozwood <tom.rozwod@norpacpaper.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Yarborough <Tom.yarborough@weyerhaeuser.com>; Tony Hardenbrook; Tyler Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Bill Gilmore <billmg@penwool.com>; Brent Downey <Brent.Downey@kaisertwd.com>; Chad Stokes <cstokes@cablehuston.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Jake Evans <Jake.evans@onsemi.com>; Jared Sommer <sommerj@byui.edu>; Jim Duke <jduke@idahoan.com>; Joe Mayette <JMayette@usg.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kyle Williams <williamsk@byui.edu>; Nick Avenetti <nick@perlite.com>; Phil Foss <phil.foss@onsemi.com>; Rick Stricker <rstricker@baf.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Sam Merrick <merricks@byui.edu>; Scott Kennedy <scott.kennedy@kaisertwd.com>; Sharon Andersen <Sharon.w.anderson@intel.com>; Steve O'Brien <sobrien@baf.com>; Tommy Brooks <tbrooks@cablehuston.com>; Chuck Gates <[redacted]; Nancy Holbrook <Nancy.Holbrook@bp.com>; Nancy Hollbrook <Nancy.Richardson@bp.com>; Robert Pierce <robert.pierce@shell.com>

Subject: AWEC Natural Gas Update

AWEC members,

Please see the urgent message below from our Natural Gas Director, Ed Finklea:

The Supply Shortage Operational Flow Order (OFO) could lead to Local Distribution Companies (LDCs) being supply constrained, which could lead to the LDCs not being able to serve their interruptible sales customers. I advise contacting your sales representatives. This event could last through the safety work being performed by Enbridge. Sumas is down to 800. Transport customers should consult with their marketers regarding any implications to deliveries or penalties.

Please let Ed know if you have further questions.

efinklea@awec.solutions

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 02/25/2019 02:34:23 PM

To: Aldis.Raisters@gapac.com; kwilson@legadv.com; kristin.b.marshall@boeing.com; lori@lorievans.us; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; mruckwardt@schn.com; mingon@ohsu.edu; todd.wiseman@solvay.com; tom@richlandpaper.com; bartlymathews@utah.gov; jeff.steed@northwesthardwoods.com; mary.mccordic@shell.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Amy Beck <amy.beck2@boeing.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Brad Beavers <bbeavers@timberproducts.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@nippondynawave.com>; Bruce Martin <bruce.martin@westrock.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Charley Hathaway <charley.hathaway@nwpsllc.com>; Charley <[redacted]>; Chris Horn <chris_h@columbiasteel.com>; Courtney Smith <courtney.smith@shell.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Dan Coyne <dancoyne@coynenet.com>; David Barge <DABarge@marathonpetroleum.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Tobin <DavidTobin@boisepaper.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Fawn Barrie <fbarrie@legadv.com>; Gary Londo <gary.j.londo@boeing.com>; Graham Bailey <graham.bailey@nippondynawave.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Ponderay <JAMIN.SIMMONS@resolutefp.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Keith Warner <keith.c.warner@boeing.com>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Ma <Mark.Brown@teck.com>; Mark Steele <Mark.Steele@norpac.com>; Marland Turner <mlturner@marathonpetroleum.com>; Marty Sedler <marty.sedler@intel.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@rocktenn.com>; Michael Kuhn <mike.kuhn@westrock.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Kaiser, Nick <Nick.Kaiser@nippondynawave.com>; Noel Mak <Noel.Mak@atimetals.com>; Pat Ealy <pat.ealy@akzonobel.com>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Pat Lydon <PLydon@lhs.org>; Pat Ortiz <pat.ortiz@westrock.com>; Paul Langley; Phil Pesek <Phil.Pesek@teck.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Samuel Liebelt <samuel.liebelt@westrock.com>; Sandi Swarthout <sswarthout@capconn.net>; Scott, Edgar <Edgar.Scott@kaiseraluminum.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <SRHawley@marathonpetroleum.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steven Castracane <steven.castracane@linde.com>; Thomas Rozwood <tom.rozwod@norpacpaper.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Yarborough <Tom.yarborough@weyerhaeuser.com>; Tony Hardenbrook; Tyler Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Ben Byman <Ben.Byman@lvpnp.com>; Ben Byman <ben.byman@weyerhaeuser.com>; Bill Gilmore <billmg@penwool.com>; Clay Riding <clayr@nw-iw.com>; Dave Rickman <dave.rickman@kaisertwd.com>; David Hawk <[redacted]; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Bryck (US), Drew M <drew.m.bryck@boeing.com>; Hendricksen, Don <[redacted]>; JaDPrice <JaDPrice@gapac.com>; Jared Sommer <sommerj@byui.edu>; Jeff Steed <jeff.steed@northwesthardswoods.com>; Jim Duke <jduke@idahoan.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kristine Dippold <Kristine.A.Dippold@boeing.com>; Kyle Williams <williamsk@byui.edu>; Laura Jane Schaefer <schaefel@ohsu.edu>; Nick Avenetti <nick@perlite.com>; Phil Foss <phil.foss@onsemi.com>; Rick Stricker <rstricker@baf.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Steve O'Brien <sobrien@baf.com>; Tom Rouleau <Tom.Rouleau@darigold.com>; Wes Hill <Wes.Hill@gapac.com>; Chuck Gates <[redacted]; Nancy Holbrook <Nancy.Holbrook@bp.com>; Nancy Hollbrook <Nancy.Richardson@bp.com>; Robert Pierce <robert.pierce@shell.com>

Subject: Urgent Gas Notice for AWEC Members

AWEC members,

Please see the urgent natural gas notice below. Please contact Ed Finklea if you have questions.

Post Date: 02/25/2019
Category: CRITICAL NOTES

Subcategory: ENTITLEMENT

TSP Name: Northwest Pipeline LLC TSP: 67977322

Critical: Y
Notice Stat Desc: SUPERSEDE
Notice Type Desc: OTHER
Post D/T: 02/25/2019 2:22 PM MCT
Notice Eff D/T: 02/25/2019 2:22 PM MCT
Notice End D/T:

Reqrd Rsp Desc: No response required
Rsp D/T:

Notice ID: 19-042
Prior Notice: 19-035
Subject: Entitlement and System Update

Notice Text:

Effective for gas day Wednesday, February 27, 2019 and until further notice, Northwest is revising its current Overrun Entitlement as follows:

Receiving Party points north of the Plymouth South constraint point, including the Spokane and Wenatchee laterals, will be revised from a Stage II (8%) Overrun Entitlement to a Stage I (3%) Overrun Entitlement, and

The locations for the Stage II (8%) Overrun Entitlement will be revised for Receiving Party points north of the Kemmerer compressor station to points south of the Plymouth South constraint point.

Northwest is making this change based on forecasted weather for the Pacific Northwest, expected variability in volumes available at the Sumas interconnect via the Westcoast Pipeline system and declining deliverability at the Jackson Prairie Storage facility.

Current inventory at Jackson Prairie is projected to be approximately 9 Bcf at the end of today, February 25, 2019, with deliverability based on that inventory level of approximately 350,000 Dth/d. Northwest anticipates the deliverability at the Jackson Prairie will be fall to approximately 250,000 Dth/d based on a facility balance of 8.5 Bcf and less than 200,000 Dth/d once inventory levels fall below 8 Bcf.

Northwest would like to remind customers that the daily deliverability at Jackson Prairie is updated daily on Northwest's Electronic Bulletin Board. (see All Shipper Notice 19-029).

Northwest would also like to remind customers of the upcoming Enbridge work February 27 through at least March 9, which will severely limit supplies coming into Northwest at Sumas.

Northwest understands the impact Entitlements have on its customers and ask for your assistance in helping us maintain the integrity of the system by procuring firm natural gas supply for anticipated demand. Northwest reminds customers that the current OFO's at Roosevelt, Plymouth South and Rangley remain in-place.

The Entitlement levels will be evaluated daily based on system line pack, storage levels, weather forecasts and upstream pipeline notices.

If you have any questions, please contact your Marketing Services Representative or the Scheduling Hotline at 801-584-7301.

DA/GV/JR

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111

801-355-4365
Fax -801-521-9142

From: Kelly Francone

To: Aldis.Raisters@gapac.com; Alicia Fuentes; Alicia Givens; Amy Beck; Bernie McNamee; Bill Castleberry; Brad Beavers; Bradley Mullins; Brian Wood; Bruce Martin; Calli Daly; Calvin Greene; Charley Hathaway; Charley; Chris Horn; Courtney Smith; Craig Anneberg; Dan Coyne; David Barge; David Clemens; David Elliot; David Tobin; Delee Shoemaker; Dennis; Don Hendricksen; Donna Gehlhaart; Doug Krapas; Drew Bryck; Drew Gilpin; Ed Finklea; Fawn Barrie; Gary Londo; Graham Bailey; Greg Vaughn; Irene Plenefisch (LCA); Janese Pearson; Ponderay; Jeff Johnson; Jennifer; Jennifer Hackett; Jim Stanton; JL Wilson; John Bob; John Carr; Josh Weber; Justen Rainey; Keith Warner; kwilson@legadv.com; Ken Dey; Ken Johnson; Kenneth Li; Kevin Davis; Kevin Rasler; Khaly Niang; kristin.b.marshall@boeing.com; Larry Voos; Leslie Adams; lori@lorievans.us; Luke Hart; Marcie Peters; Ma; Mark Steele; Marland Turner; Martha_C@columbiasteel.com; Marty Sedler; marycatherine.mcaleer@weyerhaeuser.com; Matt Upmeyer; Melissa Gombosky; Metrick Houser; Michael Culver; Michael Kuhn; Michael Kuhn; Michael Padgett; Mike Hale; Mitch Maynard; mruckwardt@schn.com; Kaiser, Nick; Noel Mak; mingon@ohsu.edu; Pat Ealy; Patrick Loupin; Pat Lydon; Pat Ortiz; Paul Langley; Phil Pesek; Ralph Saperstein; Randy Clancy; Raymond L. Beard; Richard White; Rob Buckingham; Rob Freres; Ryan Beaver; Ryan Spiller; Samantha Julian; Samuel Liebelt; Sandi Swarthout; Scott, Edgar; Scott Gutting; Scott Hawley; Scott Wagener; Skylar; Spiro E Xenos; Stan Jackson; Steven Castracane; Thomas Rozwood; Tim Boyd; Tim Root; todd.wiseman@solvay.com; tom@richlandpaper.com; Tom Yarborough; Tony Hardenbrook; Tyler Pepple; Tyne Brownlow; Wes.Hill@gapac.com; Bill Gilmore; Brent Downey; Chad Stokes; Clay Riding; Daryll Fuentes; David Hawk; David Jones; Jake Evans; Jared Sommer; Jim Duke; Joe Mayette; Joe Burrell; Kyle Williams; mary.mccordic@shell.com; Nick Avenetti; Phil Foss; Rick Stricker; Ron Tarver; Sam Merrick; Scott Kennedy; Sharon Andersen; Steve O"Brien; Tommy Brooks; Beth@cmsnaturalgas.com; Chuck Gates; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; Nancy Holbrook; Nancy Hollbrook; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted]; rick.kunz@shell.com; Robert Pierce; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Jeff Burks; Jeff Fishman; Keegan Moyer; Francone, Kelly

Subject: AWEC February 2019 Newsletter

Date: Thursday, February 28, 2019 2:59:47 PM

Attachments: AWEC February 2019 Newsletter.pdf

AWEC Members,

Please find attached the Alliance of Western Energy Consumers' February 2019 newsletter. If you have any problems opening it, please let me know. We look forward to seeing many of you next Wednesday at our first quarterly member meeting in Portland.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

Alliance of Western Energy Consumers
Monthly Energy Update

Attorneys Warn of Technical Flaws in EPA's Clean Power Rules

Page 6

For information, contact AWEC at 971.544.7169

IN THIS ISSUE:

February 2019

WUTC Approves Settlement in PSE Expedited Rate Case

The Washington Utilities and Transportation Commission conditionally approved a settlement Feb. 21 authorizing Puget Sound Energy Inc. to implement a gas rate increase of $21.5 million, or 2.9% (Docket UG-180900), effective March 1, under an expedited rate filing, or ERF. The settlement and decision call for no changes to the utility's electric rates.

The rate changes are premised upon Puget Sound Energy's currently authorized 9.5% return on equity (48.5% of capital) and 7.6% overall return, as adopted by the commission, in the company's previous rate cases decided in 2017.

PSE had implemented rate changes May 1, 2018, addressing the prospective impact of federal tax reform that lowered the corporate federal income tax rate to 21% from 35%, effective Jan. 1, 2018. The settlement and WUTC order call for PSE to pass back to customers protected excess deferred income taxes, or EDIT, through a separate tariff, effective March 1, 2019, over a period consistent with the average rate assumption method.

The parties were unable to agree on the accounting and ratemaking treatment of the return of the protected EDIT for the period Jan. 1, 2018, through Feb. 28, 2019. The settlement and WUTC order call for this issue, along with the ratemaking treatment of unprotected EDIT, to be adjudicated in the company's next rate case.

While the settlement called for the overcollection of tax expense from Jan. 1, 2018, to April 30, 2018, to be addressed in PSE's next rate case, the WUTC ordered the company to return to customers the interim -period over collected tax expense, totaling $24.1 million for electric and $10.5 million for gas, beginning May 1, 2019, over a 12-month period, concurrent with any rate adjustment made as a result of PSE's annual decoupling filing. According to the commission, the parties to the settlement "failed to demonstrate that allowing the company to delay the return of interim period over-collected tax expense to the conclusion of the company's next general rate case is in the public interest."

In the decision, the WUTC said they "believe ERFs are an important tool to address regulatory lag that also helps companies and ratepayers respond quicker to the changing energy landscape." The WUTC agreed with the staff that the currently open proceeding, an Inquiry into the Adequacy of the Current Regulatory Framework, is the place to address specific policy guidance for alternative rate proceedings, including ERFs.

(Continued on Page 2)

(Continued from Page 1)

On Nov. 7, 2018, PSE submitted an ERF, seeking to implement $18.9 million, or 0.9%, electric and $21.7 million, or 2.7%, gas rate increases. The rate changes reflected the return parameters established in PSE's last base rate cases, namely, a 9.5% return on equity (48.5% of capital) and 7.49% overall return. The ERF filing also specified electric and gas rate bases of $5.102 billion and $1.864 billion, respectively.

PSE indicated that while it could support a $37.5 million gas rate hike, it limited its requested increase to $21.7 million in accordance with prior applications of the ERF that have limited rate increases to less than 3%. Therefore, the requested overall return for the company's gas operations was 6.85%.

The ERF was submitted in accordance with the terms of the settlement adopted in the company's previous electric and gas rate case. The approved settlement allowed for PSE to submit an ERF within one year of the final order that would allow for new rates resulting from the ERF to become effective within 120 days of the ERF filing.

On Jan. 30, 2019, PSE, the WUTC staff and other parties filed a black-box settlement calling for the company to implement a gas rate increase of $21.5 million, or 2.9%, effective March 1, under the ERF. The settlement called for no changes to the utility's electric rates.

The settlement did not include recovery of or on PSE's investment in advanced metering infrastructure. However, PSE would be permitted to defer the return on investment and depreciation expense associated with advanced metering infrastructure, subject to a prudence consideration by the WUTC in PSE's next general rate case or other future proceeding.

Along with PSE and the commission staff, parties to the settlement included the Public Counsel, the Alliance of Western Energy Consumers, The Energy Project, federal executive agencies and Nucor Steel Seattle.

PSE's previous electric and gas rate cases were decided in 2017, when the WUTC authorized PSE a $106.4 million, or 5.17%, electric rate increase and a $16.6 million, or 2.03%, gas rate increase.

PGE To File For Rate Adjustment To Integrate Renewables Project

Instead of filing a general base rate case, Portland General Electric will file a renewable adjustment clause with the Oregon Public Utility Commission to recover costs for its 380-MW Wheatridge integrated renewable energy facility.

“It's almost like a rifle shot type of a general rate case ... so we'll track it into customer prices that way," Jim Lobdell, PGE's senior vice president of finance, CFO and treasurer, said Feb. 15 during the company's fourth-quarter and full-year 2018 earnings call.

The Portland company on Feb. 13 announced a partnership with NextEra Energy Inc. subsidiary NextEra Energy Resources LLC to build the facility in Morrow County, which will feature 300 MW of wind generation, 50 MW of solar generation and 30 MW of battery storage.

The integrated facility is the first generation asset of its size in the U.S. to co-locate wind, solar and energy storage, according to the companies. Located in the eastern half of the state, the wind farm is projected to come online in 2020 and the solar and storage components of the project are expected to be completed by the end of 2021.

Oregon's renewable portfolio standard, which requires investor-owned utilities to obtain 50% of power sold to retail customers from renewable energy by 2040, allows PGE to recover costs outside of a general rate case, Lobdell explained.

PGE President and CEO Maria Pope said the utility expects to file a renewable adjustment clause with the Oregon PUC after the project is complete, which will include an allowance for funds used during construction. PGE will own 100 MW of the wind project and expects to invest $160 million for its portion, while a NextEra Energy Resources subsidiary will own the balance of the project and sell the output to PGE under 30-year power purchase agreements.

Most of the $160 million will be spent in 2020, Lobdell said.

(Continued on Page 3)

(Continued from Page 2)

Asked about the economics of the Wheatridge asset's integrated design, Pope stressed the "highly competitive" nature of the bidding process. Combining the various components will allow PGE to generate and transmit energy to the utility's service region "at higher rates than we would otherwise be able to do," she said.

"We're pulling in energy during the peak hours during the day, and we're able to shift it," Lobdell added. "Typically what happens is the sun goes down before we get to our peak load, and the battery is going to allow us to shift some of that energy to better meet that peak."

NW Natural Settles on Final Rate Case Issues in Oregon

NW Natural has inked a deal resolving two issues left over from its 2018 general rate case that involve a pension balancing account and interim excess deferred income tax benefits associated with the lower federal tax rates passed in the 2017 Tax Cuts and Jobs Act.

If the Oregon PUC approves the agreement, the company expects to see an after-tax earnings charge of around $6.7 million once the order is issued, which NW Natural expects will be sometime in the current quarter.

The settlement stems from the rate-case final order, issued Oct. 31, which directed the utility to "engage in further proceedings" with stakeholders to resolve the issues by February.

Under the settlement, filed Feb. 4, NW Natural would return $3.4 million in excess deferred income taxes as an annual credit to base rates, and provide a $15 million credit to all but the Transport customers, spread over five years.

The company would also use about $12.5 million in tax act benefits to reduce its pension balancing account—$5.4 million from historical income taxes and $7.1 million deferred in 2018 through Oct. 31.

These returns and credits would increase NW Natural's rate base by about $15.4 million, and increase its revenue requirement by $1.4 million. Under the terms of the settlement, the revenue requirement may be adjusted as part of a general rate case if it is filed within five years of OPUC's approval of the settlement.

The pension balancing account is the focus of the second issue and was established in 2010 to remedy the company's chronically underfunded pension liability, through an annual $3.8 million tariff.

The account was intended to track the difference between the annual tariff and actual pension expenses, and was estimated to zero-out within 13 years.

However, actual expenses have turned out to be significantly higher than expected, which has led to an ever-increasing balance.

In a settlement reached in the rate case, but rejected by the commission, the company would have frozen the account, offset its balance by $12.6 million from the historical and interim excess deferred taxes, and added a separate $8.2-million pension tariff.

The final order essentially froze the account and authorized increasing the total annual tariff by $8 .1 million, to $11.9 million, but did not approve an offset to the account balance.

In the new settlement filed earlier this month, effective Oct. 31, 2018, the frozen account's balance would be offset by the $12.5 million tax act benefits, plus an additional $10.5 million, for a total reduction of $23 million.

Also, the account's interest rate would be reduced from the company's 7.317 percent authorized rate of return to 4.3 percent.

The remainder of the account balance would be collected over 10 years in an annual $7.3 million tariff beginning on the rate effective date.

Along with the company in the settlement are the OPUC staff, Oregon Citizens' Utility Board and the Alliance of Western Energy Consumers.

Bill That Would Make it More Difficult to Close WY Coal Plants Heads to Governor

Senate File 159 that is sponsored by Wyoming Senator Dockstader has passed both the House and the Senate and is headed to Governor Mark Gordon's desk for signature.

Based on concerns for the potential closure of PacifCorp's coal plants located in Wyoming due to a law passed in 2016 in Oregon that the state must stop using electricity generated from coal by 2030, and the looming changes to the Multi-State Protocol, SF 159 limits recovery of costs associated with electric generation built to replace retiring coal fired generation facility.

Language in the bill states: The rates charged by an electric public utility shall not include any recovery of or earnings on the capital costs associated with new electric generation facilities built, in whole or in part, to replace the electricity generated from one or more coal-fired generating units or plants located in Wyoming and retired on or after January 1, 2022.

This requirement holds unless the commission has determined that the public utility that owns the retired coal-fired electric generation facility made a good faith effort to sell the facility to another person prior to its retirement and that the public utility received no reasonable offer to purchase the facility.

The bill passed virtually unanimously in both the House and the Senate as concerns mount for what may occur in the near future with PacifiCorp as it responds to Oregon clean air requirements, the contentious MSP process, and its delay on both its recently-filed Depreciation Study and Integrated Resource Plan due to the potential impact of early coal plant closures that the utility is now studying.

The bill is being sent to the governor's desk for signature, after which it will become law unless he is not inclined to sign it.

NW Index Prices	Feb 2019	Jan 2019	Feb 2018
PGE Malin	**$3.43**	**$4.26**	**$2.69**
Kern River	**$3.41**	**$4.44**	**$2.83**
Northwest Pipeline	**$3.38**	**$4.22**	**$2.80**
NYMEX Futures Settlement	**$2.95**	**$3.642**	**$3.631**

ORE Releases Fourth Climate Assessment Report

The Oregon Climate Change Research Institute released its 2019 report on the state of the climate in Oregon, concluding that the state is already experiencing impacts of climate change, but also noting opportunities to adapt.

Examples of climate change in 2018 in the Fourth Oregon Climate Assessment Report included the extremely poor air quality from wildfires "near and far," and economic losses suffered by ranchers in southern and eastern Oregon due to low snowpack, lack of water, and a hot and dry summer.

The report says that the entire Pacific Northwest has warmed about 2 degrees Fahrenheit since 1900, with 2015 marking Oregon's warmest year on record.

It predicts that annual precipitation will not change, but extreme precipitation may occur and could lead to slope instability, landslides and closed highways. Hot days will become more frequent and could put farmworkers and other outdoor laborers at risk.

Nearly every location in Oregon has seen declining spring snowpack, and the trend is expected to continue, especially at lower elevations. Wildfire activity will increase, along with smoke.
The report also notes that climate change may offer opportunities for longer growing seasons.

FERC Approves CAISO Plan to Help Improve Key Tool Linked to Scarcity Pricing

The Federal Energy Regulatory Commission approved a California ISO proposal to modify an electronic tool to ensure that shortage pricing is not triggered when no shortage conditions exist.

Balancing authorities sometimes need to change their load forecasts before the market runs to account for forecast errors, variations in renewable output, and unpredictable events such as outages or weather. A "load conformance limiter" prevents those changes from triggering scarcity prices.

According to CAISO, the tool is needed because system operators cannot perfectly match their conformance to the available ramping capability. But the grid operator found that sometimes, the limiter was blocking scarcity pricing when it was needed and therefore proposed to improve its accuracy.

The CAISO's Department of Market Monitoring said the proposed change could spur significant price increases in two areas of the Western energy imbalance market.

If the change had been in place in 2018, average prices in the Arizona Public Service area would have increased almost $4/MWh, or 11%, in the 15-minute market and $5/MWh, or 14%, in the five-minute market. In the NV Energy area, average prices would have increased about $2/MWh, or 6%, in the 15-minute market and nearly $3/MWh, or 8%, in the five-minute market.

Powerex Corp. had worried that CAISO is relying too heavily on load adjustments, noting the independent system operator made upward load adjustments in excess of 800 MW on average during the evening peak in 2018.

And NRG Power Marketing LLC said CAISO should disable the limiter immediately because the tool suppresses real-time market prices and hurts resources that could address the ISO's need for real-time flexibility.

FERC on Feb. 21 approved CAISO's proposed changes to the limiter. "We find the proposed limiter will act to limit the application of shortage pricing during intervals where CAISO's market run indicates a shortage resulting from load conformance where actual supply is not needed."

The commission disagreed with NRG's assertion that the limiter is not needed and found that "the limiter is a reasonable mechanism to utilize, given that operators cannot fine-tune their conformance to the precise amount of adjustment needed interval to interval."

But FERC acknowledged concerns that CAISO should reduce its reliance on load conformances and the limiter. FERC noted that CAISO intends to disable the limiter in two years, after needed market design and process improvements.

“[W]e expect that CAISO will follow through on its commitment to adopt improvements that will reduce operators' reliance on load conformances," FERC said.

NATIONAL NEWS

Attorneys Warn of Technical Flaws in EPA's Clean Power Rules

Lawyers representing environmental groups see a slew of legal vulnerabilities in the Trump administration's plan for regulating carbon emissions from existing power plants. But industry attorneys also have identified a major potential problem with the proposed regulation.

The Clean Power Plan included a number of "outside the fence line" compliance mechanisms to reduce carbon dioxide emissions at existing coal plants, including shifting generation to cleaner energy sources, the ACE rule is limited to on-site measures at individual generating facilities.

The Affordable Clean Energy, or ACE, rule was proposed by the U.S. Environmental Protection Agency in August 2018 as a replacement for the Obama-era Clean Power Plan, which sought to combat climate change by encouraging states to transition away from coal-fired electricity.

At its core, the proposed regulation would determine that the best system of emission reduction for CO2 emissions at existing coal plants is efficiency upgrades known as heat-rate improvements.

The rule would require states to submit plans that include unit- specific standards of performance based on the potential for efficiency gains using a menu of heat-rate improvement technologies. Under the proposal, standards of performance must be measured in pounds of CO2 emitted per megawatt-hour.

However, determining whether a coal plant is meeting its target could be impossible in many cases because the equipment those generating units use to measure CO2 emissions — called continuous emission monitoring systems, or CEMS — simply is too imprecise, said Jay Holloway, a partner with the Williams Mullen law firm who has more than two decades of experience advising utility clients on Clean Air Act compliance issues.

"The biggest issue that this rule has is ... CEMS are just not set up to be accurate enough to measure CO2 emissions rates in the range EPA is going to be looking at and states are going to be looking at," he said Feb. 25 at the Energy, Utility and Environment Conference in San Diego, Calif.

In its proposed rule, the EPA analyzed possible scenarios using potential heat-rate improvement outcomes of 2% and 4.5%. But the margin of error with CEMS can often run as high 7.5%, Holloway noted during a presentation. "If you're looking at a 2% to 4% increase in efficiency, all of that gets swallowed up in the errors in those CEMS," he said.

Allison Wood, a partner with Hunton Andrews Kurth LLC who represents electric utilities, agreed. "We've looked at data for my clients, sometimes two units, same plant built at the same time burning the same coal, and they can have very different CO2 emission rates on the same day in the same ambient conditions," she said.

Holloway warned that if the EPA finalizes its rule as proposed, observers will note that state plans do not meet the regulation's requirement that CO2 emission rates can be accurately measured and enforced.

The EPA initially had planned to finalize the ACE rule by the end of March, but the agency recently said it will issue a final regulation sometime in the second quarter of 2019.

Environmental groups also have argued that the proposal violates the Clean Air Act by failing to set a specific CO2 emission reduction target and would allow emissions to increase in some states compared to adopting no rule at all.

Senators Urge FERC to Open Markets to Distributed Energy

Noting that the Federal Energy Regulatory Commission started working more than two years ago on regulations aimed at fully opening the nation's organized electricity markets to aggregated distributed energy resources, 18

(Continued on Page 7)

(Continued from Page 6)

mostly Democratic U.S. senators sent a letter to the agency's chairman urging him to issue a final rule "as soon as possible."

In doing so, the senators cited a June 2018 speech made by Chairman Neil Chatterjee — who was a FERC commissioner at the time — in which he cited "a growing interest among many stakeholders to expand the definition of 'transmission' beyond the traditional wires-and-poles paradigm, accommodating alternative solutions consisting of different combinations of demand response, [distribute energy resources] and storage."

“We are encouraged by Chairman Chatterjee's recent comments where he emphasized the role that innovation and new technologies will play in improving the function of our grid," the lawmakers, led by Sen. Sheldon Whitehouse, D-R.I., said in the Feb. 11 letter.

FERC in November 2016 issued a notice of proposed rulemaking aimed at removing barriers that were keeping energy storage resources, such as batteries and flywheels, and distributed resource aggregations from more fully participating in markets run by the nation's regional transmission organizations and independent system operators.

In February 2018, the commission released its long-awaited final rule, Order 841, directing each grid operator to establish market rules that accommodate the participation of storage resources in their capacity, energy and ancillary services markets to the extent possible

But the agency postponed taking final action on reforms to address the other goal set out in the notice — facilitating market participation by distributed energy resource, or DER, aggregations — and instead scheduled a technical conference for the following June to look into the issue further.

Since then, the FERC initiative appears to have stalled. The group of senators, which in addition to Whitehouse include Democrats Edward Markey of Massachusetts, Cory Booker of New Jersey and Kamala Harris of California along with independents Angus King Jr. of Maine and Bernie Sanders of Vermont, therefore asked for an update by March 1 on the agency's effort to "build on the important progress made in Order 841."

Recalling that renewable energy provided a record 10% of electricity generated in 2018, the senators said DER adoption and renewable energy aggregation have continued to grow in the U.S. in recent years "driven not only by state and federal policies, but consumer interest in choosing cost-competitive technologies such as rooftop solar, smart thermostats, and customer-sited energy generation and storage."

“FERC has the opportunity and authority to ensure that proper technology-neutral market rules are put forward to reduce barriers for DER participation in our grid," the senators wrote. "The changes proposed in the DER rulemaking will not only help improve the reliability and resilience of the bulk power system by providing operators with new local tools to manage unanticipated events, but potentially lower costs for consumers."

Executives Believe More Consumers Will Move Off The Grid

Ninety-five percent of utilities executives agree that the risk of electricity consumers going largely off the grid and only using it as occasional back-up will increase significantly in the next two years, according to a study from Accenture conducted as part of the company’s Digitally Enabled Grid research program.

“Mass adoption of electric vehicles and the electrification of building heating is poised to alter demand growth and load shape in the longer term”.

The deployment of distributed generation (DG) technologies like rooftop solar is increasing faster than utilities can build new grid capacity to handle it in high-demand areas, according to the vast majority (95 percent) of the 150 executives surveyed across 25 countries. In fact, almost half (48 percent) of the respondents said that parts of their grid will reach maximum capacity in three years or less, with only 1 percent believing it will take longer than five years

. The proportion of both residential and commercial consumers with rooftop solar photovoltaics in the markets modelled could even exceed 15 percent by 2036 in some markets, such as California. This trend will likely continue to affect net electricity demand growth for the foreseeable future.

(Continued on Page 8)

(Continued from Page 7)

The study also notes that increased deployment of DG will complicate utilities' operations, requiring distribution utilities to act now to avoid the excessive grid-reinforcement spending required to host new DG energy flows.

According to Accenture modeling, some markets could generate substantial capital reinforcement cost savings simply through better identification of local constraints on the distribution network.

A 10 percent improved accuracy in DG forecasts, resulted in projected savings of 15-28 percent in New York, 14-18 percent in California, 14-15 percent in Australia, and 11-12 percent in both the United Kingdom and the Netherlands.

In fact, DG integration was ranked as the second-highest priority area as a cost-saving opportunity, selected by 59 percent of respondents as one of their top 5 choices. The top priority, chosen by 61 percent of respondents, was reducing supply chain unit costs through improved forecasting of materials and service requirements.

"Distribution businesses have had a tough time in recent years with weak demand, which is one reason why grid operators' profits have been squeezed," said Stephanie Jamison, a managing director at Accenture who leads its Transmission and Distribution business.

"The proliferation of DG changes electricity demand profiles, potentially diminishing total demand without necessarily reducing peak demand. Successful DG integration will require substantial investments in new connections and grid reinforcement to modernize the network and sustain the same level of reliability and safety and secure operations."

While DG presents a challenge to distribution utilities, it's also an opportunity, with 95 percent of respondents saying that DG and storage-services provision will be a major profit growth area for distribution companies beyond 2025.

Citing Emissions Drop, US EPA Retains SO2 Standard

The U.S. Environmental Protection Agency issued a final decision to retain the current primary National Ambient Air Quality Standard for sulfur dioxide.

In a news release dated Feb. 25, the agency said that determination was based on a careful review of the latest scientific evidence and in consultation with the agency's Clean Air Scientific Advisory Committee, or CASAC.

The NAAQS for various pollutants must be reviewed every five years and can be retained or modified at the EPA administrator's discretion. SO2 and similar compounds typically are produced by burning fossil fuels, specifically as a result of coal-fired power generation, and can contribute to acid rain and haze.

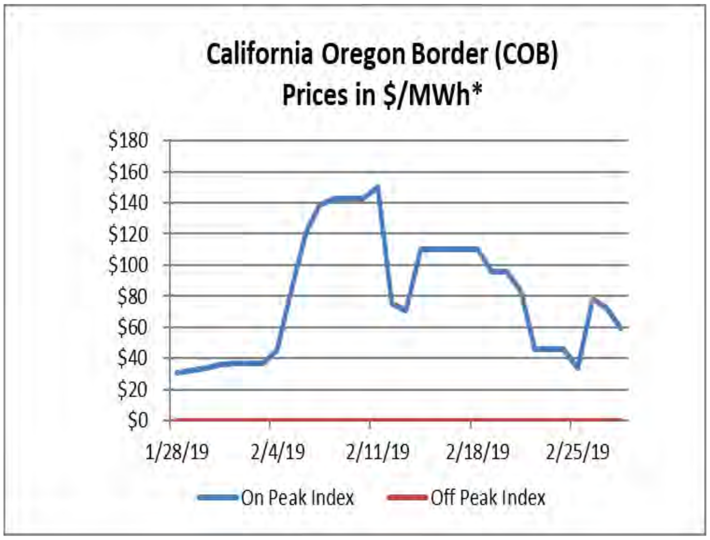
The primary standard for SO2 was last updated in 2010. After a court agreed that the EPA had failed to conduct the next review on time, the agency agreed to a consent decree requiring it to release a proposed decision by May 25, 2018, and a final decision by Jan. 28.

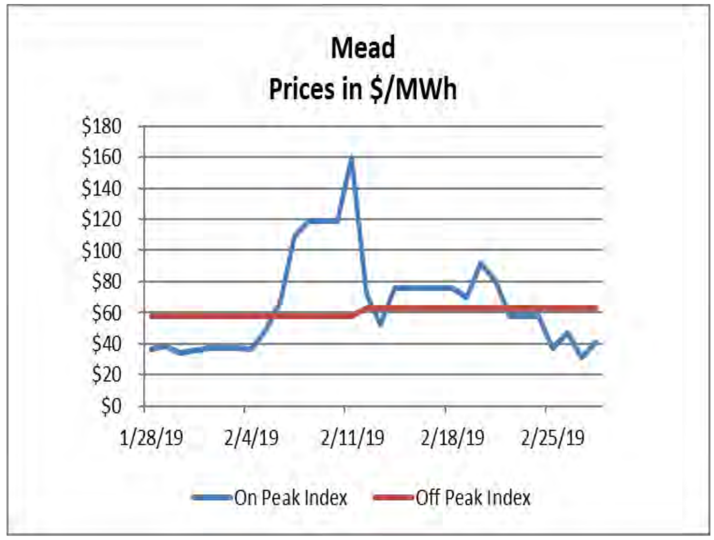
Former EPA Administrator Scott Pruitt in May 2018 opted to retain the primary standard of 75 parts per billion averaged over three years. The CASAC concurred with the EPA decision.

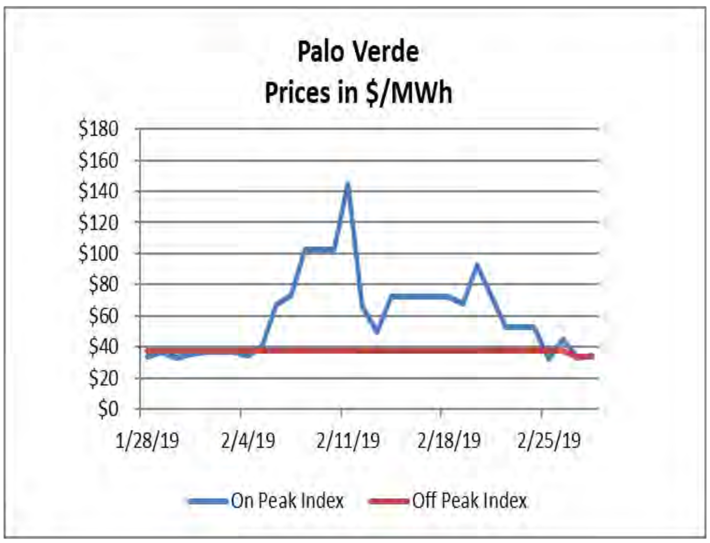
The EPA in its most recent news release noted that annual emissions of SO2 from power plants have fallen 92% since 1990. The agency's latest report on power plant emissions also shows that SO2 emissions from electric generating units declined 6% between 2017 and 2018.

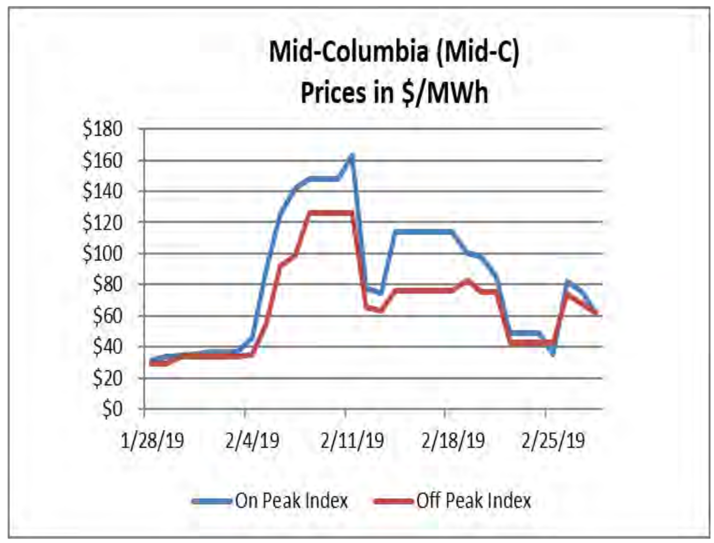
According to the EPA, the consent decree provided that the deadline for issuing a final decision on the primary NAAQS for SO2 could be extended "one day for every day" of the recent partial government shutdown.

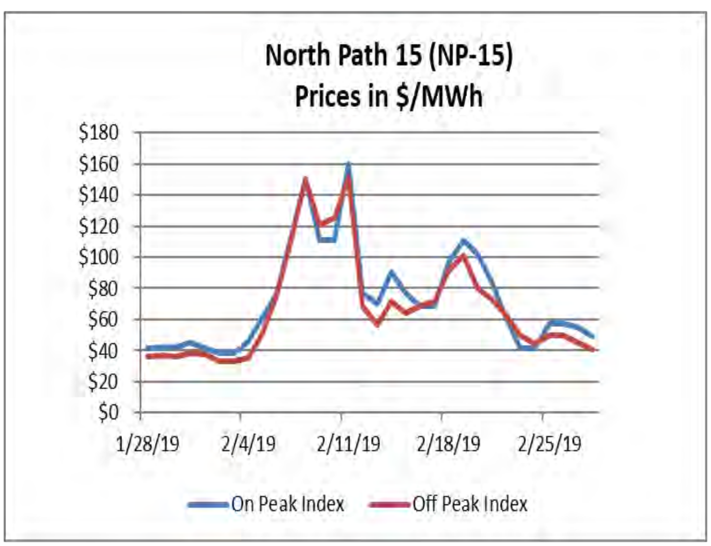
Western Electricity Market Prices

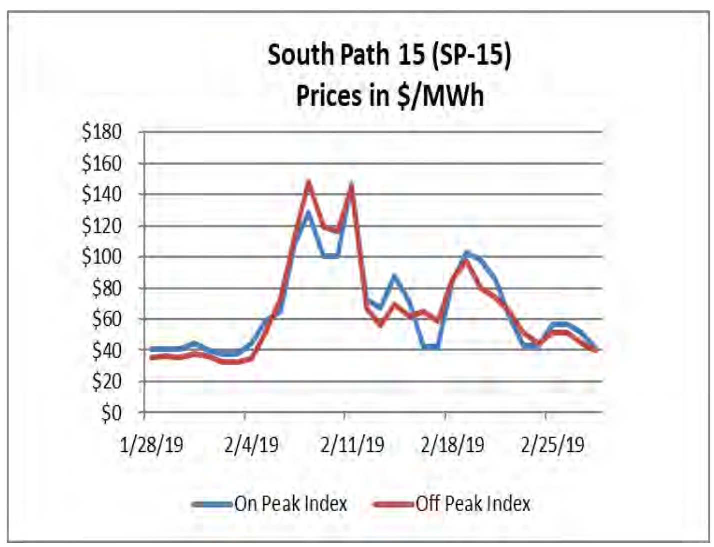












* COB off-peak prices unavailable

From: Kelly Francone <kfrancone@energystrat.com>

Sent time: 03/04/2019 10:18:19 AM

To: Aldis.Raisters@gapac.com; kwilson@legadv.com; kristin.b.marshall@boeing.com; lori@lorievans.us; Martha_C@columbiasteel.com; marycatherine.mcaleer@weyerhaeuser.com; mruckwardt@schn.com; mingon@ohsu.edu; todd.wiseman@solvay.com; tom@richlandpaper.com; Wes.Hill@gapac.com; mary.mccordic@shell.com; Beth@cmsnaturalgas.com; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted] rick.kunz@shell.com; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Alicia Fuentes <Alicia.Fuentes@solvay.com>; Alicia Givens <agivens@pacounsel.org>; Amy Beck <amy.beck2@boeing.com>; Bernie McNamee <bmcnamee@timberproducts.com>; Bill Castleberry <Bill.Castleberry@emeraldmaterials.com>; Brad Beavers <bbeavers@timberproducts.com>; Bradley Mullins <brmullins@mwanalytics.com>; Brian Wood <brian.wood@nippondynawave.com>; Bruce Martin <bruce.martin@westrock.com>; Calli Daly <calli.daly@kochps.com>; Calvin Greene <[redacted]; Charley Hathaway <charley.hathaway@nwpsllc.com>; Charley <[redacted]>; Chris Horn <chris_h@columbiasteel.com>; Courtney Smith <courtney.smith@shell.com>; Craig Anneberg <Craig.anneberg@norpacpaper.com>; Dan Coyne <dancoyne@coynenet.com>; David Barge <DABarge@marathonpetroleum.com>; David Clemens <David.Clemens@darigold.com>; David Elliot <davidelliott@boisebuilding.com>; David Tobin <DavidTobin@boisepaper.com>; Delee Shoemaker <delees@microsoft.com>; Dennis <Dennis.Draleau@recsilicon.com>; Don Hendricksen <donald.j.hendrickson@boeing.com>; Donna Gehlhaart <Donna.Gehlhaart@ipaper.com>; Doug Krapas <dougkrapas@iepco.com>; Drew Bryck <drew.m.bryck@boeing.com>; Drew Gilpin <drew.gilpin@evrazna.com>; Ed Finklea <efinklea@awec.solutions>; Fawn Barrie <fbarrie@legadv.com>; Gary Londo <gary.j.londo@boeing.com>; Graham Bailey <graham.bailey@nippondynawave.com>; Graham Pickering <gcpickering@marathonpetroleum.com>; Greg Vaughn <greg.vaughn@resolutefp.com>; Irene Plenefisch (LCA) <irenep@microsoft.com>; Janese Pearson <Janese.Pierson@ipaper.com>; Ponderay <JAMIN.SIMMONS@resolutefp.com>; Jeff Johnson <Jeff.Johnson@recsilicon.com>; Jennifer <jenny@pacounsel.org>; Jennifer Hackett <Jena.Hackett@ipaper.com>; Jennifer Steiner-Burner <jsteinerburn@marathonpetroleum.com>; Jim Stanton <jstanton@microsoft.com>; JL Wilson <jlwilson@pacounsel.org>; John Bob <John.Bob@am.dynonobel.com>; John Carr <jcarr@awec.solutions>; Josh Weber <jdw@dvclaw.com>; Justen Rainey <JustenR@pacounsel.org>; Keith Warner <keith.c.warner@boeing.com>; Ken Dey <ken.dey@simplot.com>; Ken Johnson <ken.johnson@recsilicon.com>; Kenneth Li <kenneth.Li@gapac.com>; Kevin Davis <kevin_davis@iepco.com>; Kevin Rasler <kevin_rasler@iepco.com>; Khaly Niang <Khaly.Niang@airliquide.com>; Larry Voos <larry.voos@norpacpaper.com>; Leslie Adams <adamsla@airproducts.com>; Luke Hart <Luke.Hart@axiall.com>; Marcie Peters <marcie.peters@solvay.com>; Ma <Mark.Brown@teck.com>; Mark Steele <Mark.Steele@norpac.com>; Marland Turner <mlturner@marathonpetroleum.com>; Marty Sedler <marty.sedler@intel.com>; Matt Upmeyer <matt.upmeyer@lambweston.com>; Melissa Gombosky <[redacted]; Metrick Houser <Metrick.Houser@ipaper.com>; Michael Culver <michael.culver@ipaper.com>; Michael Kuhn <MKuhn@rocktenn.com>; Michael Kuhn <mike.kuhn@westrock.com>; Michael Padgett <Michael.Padgett@alcoa.com>; Mike Hale <Michael.Hale@simplot.com>; Mitch Maynard <mmaynard@deltaenergyllc.com>; Kaiser, Nick <Nick.Kaiser@nippondynawave.com>; Noel Mak <Noel.Mak@atimetals.com>; Pat Ealy <pat.ealy@akzonobel.com>; Patrick Loupin <PatrickLoupin@packagingcorp.com>; Pat Lydon <PLydon@lhs.org>; Pat Ortiz <pat.ortiz@westrock.com>; Paul Langley; Phil Pesek <Phil.Pesek@teck.com>; Ralph Saperstein <Ralph@ralphsaperstein.com>; Randy Clancy <clancyrb@airproducts.com>; Raymond L. Beard <BEARDRL@airproducts.com>; Richard White <richard.a.white7@boeing.com>; Rob Buckingham <rob.buckingham@norpacpaper.com>; Rob Freres <rtfreres@frereslumber.com>; Ryan Beaver <Ryan.Beaver@weyerhaeuser.com>; Ryan Spiller <Ryan@capconn.net>; Samantha Julian <Samanthaj@pacounsel.org>; Samuel Liebelt <samuel.liebelt@westrock.com>; Sandi Swarthout <sswarthout@capconn.net>; Scott, Edgar <Edgar.Scott@kaiseraluminum.com>; Scott Gutting <sgutting@energystrat.com>; Scott Hawley <SRHawley@marathonpetroleum.com>; Scott Wagener <Scott.Wagener@spfibertech.com>; Skylar <Skyler.Mlasko@northwesthardwoods.com>; Spiro E Xenos <spiro.e.xenos@boeing.com>; Stan Jackson <S.Jackson@shell.com>; Steven Castracane <steven.castracane@linde.com>; Thomas Rozwood <tom.rozwod@norpacpaper.com>; Tim Boyd <[redacted]; Tim Root <timothy.root@axiall.com>; Tom Yarborough <Tom.yarborough@weyerhaeuser.com>; Tony Hardenbrook; Tyler Pepple <tcp@dvclaw.com>; Tyne Brownlow <tyne.brownlow@ipaper.com>; Wyatt Elbin <wpelbin@marathonpetroleum.com>; Bill Gilmore <billmg@penwool.com>; Brent Downey <Brent.Downey@kaisertwd.com>; Chad Stokes <cstokes@cablehuston.com>; Clay Riding <clayr@nw-iw.com>; Daryll Fuentes <dfuentes@usg.com>; David Hawk <[redacted]; David Jones <david.jones@swansongroup.biz>; Jake Evans <Jake.evans@onsemi.com>; Jared Sommer <sommerj@byui.edu>; Jim Duke <jduke@idahoan.com>; Joe Mayette <JMayette@usg.com>; Joe Burrell <Joseph.g.burrell@jci.com>; Kyle Williams <williamsk@byui.edu>; Nick Avenetti <nick@perlite.com>; Phil Foss <phil.foss@onsemi.com>; Rick Stricker <rstricker@baf.com>; Ron Tarver <ron.tarver@swansongroup.biz>; Sam Merrick <merricks@byui.edu>; Scott Kennedy <scott.kennedy@kaisertwd.com>; Sharon Andersen <Sharon.w.anderson@intel.com>; Steve O'Brien <sobrien@baf.com>; Tommy Brooks <tbrooks@cablehuston.com>; Chuck Gates <[redacted]; Nancy Holbrook <Nancy.Holbrook@bp.com>; Nancy Hollbrook <Nancy.Richardson@bp.com>; Robert Pierce <robert.pierce@shell.com>; Jeff Burks <jburks@energystrat.com>; Francone, Kelly <kfrancone@energystrat.com>

Subject: AWEC March 6th Member Meeting Documents

Attachments: AWEC Member Meeting Agenda March 6 2019.pdf   Washington Legislative Report.pdf   Pac Counsel Oregon Legislative Report.pdf   BPA Update for March 2019 AWEC Meeting.pdf   PGE Update for March 2019 AWEC Meeting.pdf   PSE Update for March 2019 AWEC Meeting.pdf   Generic Proceedings Update for March 2019 AWEC Meeting.pdf   PacifiCorp Update for March 2019 Meeting.pdf   Avista Update for March 2019 AWEC Meeting.pdf   Natural Gas State and Federal Memo for AWEC March 2019 Meeting.pdf

---

AWEC Members,

Please find attached the documents that will be discussed at our member meeting that we will be holding at the Sheraton Portland Airport Hotel on Wednesday. The call-in number can be found at the top of the agenda. The documents are attached in the order that issues will be discussed from left to right.

Please let me know if you have any questions. We look forward to seeing you.

Sheraton Portland Airport Hotel
8235 NE Airport Way
503 – 281-2500

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

CONFIDENTIAL – PLEASE DO NOT DISTRIBUTE

AWEC MEMBER MEETING AGENDA

Portland Sheraton Airport Hotel
Room: Cascade ABC
March 6, 2019

Call-in number: 866- 863-8866
Passcode: 2309215

8:00-9:00 am — *Breakfast*

Electric Section

9:00 am — *Call to Order and Antitrust Statement – John Carr, Executive Director*

1. Brief introduction provided by each AWEC member in attendance and on conference call line

9:05-9:10 am — *Administrative – John Carr*

- June 5 AWEC Gas Member Meeting
- June 5/6, AWEC Joint Electricity/Gas Conference with NWGA – Skamania Lodge
- June 7, AWEC Electric Member Meeting – Skamania Lodge, Keynote speaker – TBD
- November 12, AWEC Annual Member Meeting, Seattle

  Keynote speaker – TBD

2. General organizational update
   - Finances
   - New member: Teck Washington

9:10 - 10:00 am — *Legislative Update*

1. Washington – Tim Boyd
2. Oregon – JL Wilson, Public Affairs Counsel

10:00 – 10:20 — *GHG Legislation's Impacts on Members*

1. Jeff Burks, Energy Strategies

10:20 – 10:30 am — *Break*

10:30 - 11:55 am — *Regulatory Updates – Josh Weber and Brad Mullins*

BONNEVILLE POWER ADMINISTRATION

1. TC-20 Settlement
2. BP-20 Transmission and Power Rate Proceeding

3. Grid Modernization and Markets Initiative

PORTLAND GENERAL ELECTRIC COMPANY

1. UE 335 – 2018 General Rate Case ("GRC")
2. UM 1953 – Green Tariff
3. ADV 919 – New Load Direct Access Tariff

PUGET SOUND ENERGY

1. U-180680 – Sale of Macquarie Interest
2. UE-180899/UG-180900 – Expedited Rate Filing

GENERIC PROCEEDINGS

Oregon

1. AR 610, 616 – RPS Rulemakings
2. UM 1909 – Request for Ruling on Costs that Can be Deferred for Later Recovery in Rates
3. UM 2000 – PURPA Investigation

Washington

1. U-161024 – IRP Rule and Process Changes
2. UE-170002/UG-170003 – Cost of Service Collaborative
3. U-180907 – Alternative Ratemaking Process

PACIFICORP

Oregon

1. Inter-Jurisdictional Cost Allocation
   - UM 1824 – Oregon-specific Investigation
   - Multi-State Process ("MSP") Workgroup
2. UM 1968 – Depreciation Study
3. LC 70 – 2019 IRP
4. UM 1985 – Amortization of Federal Tax Savings

Washington

1. UE-180778 – Depreciation Study
2. UE-171219 – Amortization of Federal Tax Savings

AVISTA

1. UE-170970 – Avista/Hydro One Merger
2. UE-180167/UG-180168 – Depreciation Study

Electric and Natural Gas Lunch and Keynote Speaker

12:00 – 12:30 pm *Luncheon*

12:30 -1:00 pm *Guest Speaker* – WUTC Chairman David Danner

Natural Gas Section

1:00 – 1:05 pm *Administrative – Ed Finklea, Director of Natural Gas*

1:05 – 1:15 pm Enbridge Pipeline Update

1:15 – 2:00 pm *Regulatory and Legislative Updates – Chad Stokes and Tommy Brooks*

WASHINGTON

1. Puget Sound Energy – Tariff Issue with Curtailments and Entitlements
2. NW Natural Rate Case (UG-181053)
3. Cost of Service Collaborative (UG-170003)
4. Hedging Workshop (UG-180734, UG-180825 and UG-180795)

OREGON

1. NW Natural Rate Case, Phase II (UG-344)
2. Investigation to defer Capital Costs (UM-1909)
3. Cascade Rate Case (UG-347)
4. Avista Tax Cuts and Jobs Act (UM-1918)
5. Cascade Tax Cuts and Jobs Act (UM-1922)

OREGON/WASHINGTON

1. Hydro One Purchase of Avista Rejected (UM 1897) and investigation into Termination Fee (UM 1996).

2:30 pm *Adjourn* – John Carr

CONFIDENTIAL – PLEASE DO NOT DISTRIBUTE

AWEC MEMBER MEETING AGENDA

Portland Sheraton Airport Hotel
Room: Cascade ABC
March 6, 2019

Call-in number: 866- 863-8866
Passcode: 2309215

8:00-9:00 am *Breakfast*

Electric Section

9:00 am *Call to Order and Antitrust Statement – John Carr, Executive Director*

1. Brief introduction provided by each AWEC member in attendance and on conference call line

9:05-9:10 am *Administrative – John Carr*

- June 5 AWEC Gas Member Meeting
- June 5/6, AWEC Joint Electricity/Gas Conference with NWGA – Skamania Lodge
- June 7, AWEC Electric Member Meeting – Skamania Lodge, Keynote speaker – TBD
- November 12, AWEC Annual Member Meeting, Seattle

  Keynote speaker – TBD

2. General organizational update
   - Finances
   - New member: Teck Washington

9:10 - 10:00 am *Legislative Update*

1. Washington – Tim Boyd
2. Oregon – JL Wilson, Public Affairs Counsel

10:00 – 10:20 *GHG Legislation's Impacts on Members*

1. Jeff Burks, Energy Strategies

10:20 – 10:30 am *Break*

10:30 - 11:55 am *Regulatory Updates – Josh Weber and Brad Mullins*

BONNEVILLE POWER ADMINISTRATION

1. TC-20 Settlement
2. BP-20 Transmission and Power Rate Proceeding

3. Grid Modernization and Markets Initiative

PORTLAND GENERAL ELECTRIC COMPANY

1. UE 335 – 2018 General Rate Case ("GRC")
2. UM 1953 – Green Tariff
3. ADV 919 – New Load Direct Access Tariff

PUGET SOUND ENERGY

1. U-180680 – Sale of Macquarie Interest
2. UE-180899/UG-180900 – Expedited Rate Filing

GENERIC PROCEEDINGS

Oregon

1. AR 610, 616 – RPS Rulemakings
2. UM 1909 – Request for Ruling on Costs that Can be Deferred for Later Recovery in Rates
3. UM 2000 – PURPA Investigation

Washington

1. U-161024 – IRP Rule and Process Changes
2. UE-170002/UG-170003 – Cost of Service Collaborative
3. U-180907 – Alternative Ratemaking Process

PACIFICORP

Oregon

1. Inter-Jurisdictional Cost Allocation
   - UM 1824 – Oregon-specific Investigation
   - Multi-State Process ("MSP") Workgroup
2. UM 1968 – Depreciation Study
3. LC 70 – 2019 IRP
4. UM 1985 – Amortization of Federal Tax Savings

Washington

1. UE-180778 – Depreciation Study
2. UE-171219 – Amortization of Federal Tax Savings

AVISTA

1. UE-170970 – Avista/Hydro One Merger
2. UE-180167/UG-180168 – Depreciation Study

Electric and Natural Gas Lunch and Keynote Speaker

12:00 – 12:30 pm *Luncheon*

12:30 -1:00 pm *Guest Speaker* – WUTC Chairman David Danner

Natural Gas Section

1:00 – 1:05 pm *Administrative – Ed Finklea, Director of Natural Gas*

1:05 – 1:15 pm Enbridge Pipeline Update

1:15 – 2:00 pm *Regulatory and Legislative Updates – Chad Stokes and Tommy Brooks*

WASHINGTON

1. Puget Sound Energy – Tariff Issue with Curtailments and Entitlements
2. NW Natural Rate Case (UG-181053)
3. Cost of Service Collaborative (UG-170003)
4. Hedging Workshop (UG-180734, UG-180825 and UG-180795)

OREGON

1. NW Natural Rate Case, Phase II (UG-344)
2. Investigation to defer Capital Costs (UM-1909)
3. Cascade Rate Case (UG-347)
4. Avista Tax Cuts and Jobs Act (UM-1918)
5. Cascade Tax Cuts and Jobs Act (UM-1922)

OREGON/WASHINGTON

1. Hydro One Purchase of Avista Rejected (UM 1897) and investigation into Termination Fee (UM 1996).

2:30 pm *Adjourn* – John Carr

the TSB COMMUNICATIONS group

public government media relations

Weekly Legislative Report
Alliance of Western Energy Consumers
March 3, 2019

Fiscal Committee Week Ends in a Climate Crescendo!

It was a week on the legislative schedule focused on the fiscal committees — Ways & Means and Transportation in the Senate and Finance, Appropriations, and Transportation in the House. Those committees worked long hours holding public hearings and taking votes on dozens of bills. Most passed; some died failing to make a Friday (3/1) deadline. Once the bill tracking system catches up, they'll be labelled DEAD for the session.

The week, however, will be better remembered for ending in a climate crescendo! On Friday, Governor Jay Inslee (D) official announced his run for President based on a campaign to defeat climate change. Here's a link to his video entitled *This is Our Moment:* https://jayinslee.com/

Not by coincidence, the same morning as Inslee's announcement, the State Senate voted along party lines to pass the Governor's 100% Clean Energy bill (E2SSB 5116). During a two-hour floor debate the day before, Democrats voted down a couple dozen Republican amendments but adopted a few of their own, including a reduction in the cost cap from 3% to 2% annually. Significant, yes, but it needs to be put in context. In addition to any other rate proceedings, this is an extra 2% added to rates every year through 2045 all to be invested in carbon-free generation. Other amendments to provide an off-ramp in the event of "rate shock" were all rejected.

E2SSB 5116 now goes to the House, which allowed the companion measure (2SHB 1211) to die. A public hearing in the Environment & Energy Committee is already scheduled for Tuesday (3/5), and Chair Joe Fitzgibbon (D), who isn't happy with some of the changes the Senate made to the original bill, is expected to act quickly — likely pushing the measure in the wrong direction.

Now that Clean Energy is out of the Senate, Environment, Energy & Technology Chair Reuven Carlyle (D) is expected to formally introduce his cap-and-trade legislation. And if all that wasn't enough, Senator Steve Hobbs (D) introduced a carbon fee of $15 a metric ton as part of the $17 billion package to fund transportation infrastructure.

I testified for AWEC against SB 5971 as it applies to electricity and natural gas consumption based on a lack of nexus. I'm also working with the Chair Hobbs and his staff on an exemption, at a minimum, for an inclusive list of energy-intensive, trade-exposed sectors by NAICS Code.

Other elements of the Governor's Climate package are also advancing. We've negotiated a rate impact cap of one-quarter of one-percent for all utility investments in electrification of the transportation grid, and are seeking a clarifying amendment to protect natural gas transport customers from costs associated with requirement investments in renewable natural gas.

Lastly, it's noteworthy that WUTC Chair Dave Danner, who is a gubernatorial appointee, was confirmed unanimously (46-0-3) by the State Senate on Friday (3/1) to serve another six-year term extending through 2024. Danner has been an advocate for payments of stranded costs and defined service territories.

Upcoming Events

Environment & Energy (House) - HHR B, JLOB - 3/5 @ 8:00am

- 2SSB 5116 - Public Hearing - Supporting Washington's clean energy economy and transitioning to a clean, affordable, and reliable energy future. (If measure is referred to committee.)

Bill Tracking Summary

Bill Details		Status	Sponsor	Priority	Position
HB 1070 **(SB 5108)**	**Natural gas tax treatment** Concerning the tax treatment of renewable natural gas. *Summary:* Provides a public utility tax exemption on the sale by a gas distribution business of renewable natural gas. States that the sale of natural gas, including compressed natural gas and liquefied natural gas used or sold to manufacture transportation fuel, and renewable natural gas by a gas distribution business, are not exempt from business and occupation taxes under certain circumstances.	H Rules R	Mosbrucker	Monitoring	Neutral
HB 1102 **(SB 5134)**	**Capital budget 2019-2021** Concerning the capital budget. *Summary:* Funds capital projects.	H Cap Budget	Tharinger	Monitoring	Neutral
HB 1108 **(SB 5154)**	**Supp. operating budget 17-19** Making 2017-2019 biennium second supplemental operating appropriations. *Summary:* Makes 2017-2019 biennium second supplemental operating appropriations.	H Approps	Ormsby	Monitoring	Neutral
HB 1109 **(SB 5153)**	**Operating budget 2019-2021** Making 2019-2021 biennium operating appropriations. *Summary:* Makes 2019-2021 biennium operating appropriations.	H Approps	Ormsby	High	Neutral
2SHB 1110 **(SB 5412)**	**Greenhouse gas/transp. fuels** Reducing the greenhouse gas emissions associated with transportation fuels. *Summary:*	H Rules R	Fitzgibbon	Monitoring	Neutral
SHB 1113	**Greenhouse emission limits** Amending state greenhouse gas emission limits for consistency with the most recent assessment of climate change science and with the United States' commitment under the 2015 Paris climate	H Approps	Slatter	Medium	Concerns

agreement.

Summary:

HB 1126

Distributed energy | H 2nd Reading | Morris | Monitoring | Neutral

Enabling electric utilities to prepare for the distributed energy future.

Summary: Declares that the policy of the state, that a distributed energy resources planning process engaged in by an electric utility, should accomplish the following: (1) Identify the data gaps that impede a robust planning process as well as any upgrades; (2) Propose monitoring, control, and metering upgrades; (3) Identify potential programs and tariffs to fairly compensate customers for the value of their distributed energy resources; (4) Forecast the growth of distributed energy resources on the utility's distribution system; (5) Provide a ten-year plan for distribution system investments and an analysis of nonwires alternatives for major transmission and distribution investments; and (6) Include the distributed energy resources in the plan in the utility's integrated resource plan. Requires the legislature to, by January 1, 2023, conduct an initial review of the state's policy pertaining to distributed energy resources planning.

HB 1127
(Dead)

Transp. electrification | H Env & Energy | Morris | Medium | Concerns

Concerning the electrification of transportation.

Summary: Authorizes the governing authority of an electric utility, formed under chapter 35.92 RCW (municipal utilities), and the commission of a public utility district to adopt a transportation electrification plan. Requires the department of commerce to arrange for a study of utility capital expenditures projected to be driven by growth in distributed resources, including photovoltaic systems, electric vehicles, and other customer-owned technologies identified as likely to cause a shift in capital expenditures. Requires the study to survey each of the state's utilities and include a low and high adoption scenario for each resource. Provides that this act is null and void if appropriations are not approved.

HB 1128
(Dead)

Electric & nat gas companies | H Env & Energy | Morris | Medium | Concerns

Authorizing an alternative form of regulation of electrical and natural gas companies.

Summary: Authorizes the utilities and transportation commission to regulate an electrical or gas company by authorizing an alternative form of regulation. Requires electrical companies, gas companies, multistate electric companies, and/or the commission to use the greenhouse gas planning adder under certain circumstances.

HB 1129
(Dead)

Customer-sited electricity | H Env & Energy | Morris | Monitoring | Neutral

Concerning customer-sited electricity generation.

Summary: Authorizes an electric utility to: (1) Offer to make net metering available to eligible customer-generators with large net metering systems or small net metering systems; (2) Offer an alternative to net metering for customer-generators with large net metering systems or small net metering systems in all or certain increments of the utility's distribution system; and (3) Use net metering credits to assist qualified low-income residential customers of the electric utility in paying their electricity bills. Places responsibility on a customer-generator for the purchase of a production meter and software if it is required by the electric utility to provide meter aggregation. Requires customer billings issued by certain light or power businesses or gas distribution businesses to include the total amount of kilowatt-hours of electricity consumed for the most recent twelve-month period.

[2SHB 1211](#) (E2SSB 5116)	**Clean energy**	H Approps	Tarleton	High	Concerns
	Supporting Washington's clean energy economy and transitioning to a clean, affordable, and reliable energy future. *Summary:*				
[SHB 1226](#)	**Clean energy**	H Finance	DeBolt	Medium	Neutral
	Encouraging investment in and reducing the costs of transitioning to the clean energy future. *Summary:*				
[HB 1232](#) (Dead)	**Hydroelectricity/renewable**	H Env & Energy	Griffey	Medium	Support
	Recognizing hydroelectricity as an eligible renewable resource in the energy independence act. *Summary:* Revises the definition of "eligible renewable resource," for purposes of the energy independence act, to include electricity from a generation facility powered by water that commenced operation before March 31, 1999, where the facility is located in the Pacific Northwest.				
[2SHB 1257](#) (2SSB 5293)	**Energy efficiency**	H Approps	Doglio	Monitoring	Concerns
	Concerning energy efficiency. *Summary:*				
[SHB 1332](#) (SB 5329)	**Energy site eval. council**	H 2nd Reading	Wylie	Monitoring	Neutral
	Concerning updating and streamlining energy facility site evaluation council operations. *Summary:*				
[SHB 1334](#) (SSB 5305)	**Electric util wildland fires**	H Rules R	Blake	Monitoring	Neutral
	Concerning electric utility wildland fire prevention. *Summary:*				
[SHB 1512](#)	**Transp. electrification**	H 2nd Reading	Fey	Medium	Concerns
	Concerning the electrification of transportation. *Summary:*				
[HB 1549](#) (Dead) (SB 5561)	**Greenhouse emissions eval.**	H Env & Energy	Blake	Monitoring	Neutral
	Directing the department of ecology to adopt a rule governing the evaluation of greenhouse gas emissions under chapter 43.21C RCW. *Summary:* Requires the department of ecology to: (1) Adopt a rule establishing the process by which lead agencies evaluate environmental impacts of greenhouse gas emissions when conducting environmental review of project and nonproject actions under the state environmental policy act; and (2) Before adopting the rules, engage in government-to-government consultation with Indian tribes.				

Bill	Topic	Committee	Sponsor	Priority	Position
HB 1597 (Dead)	**Greenhouse gas/fossil fuels**	H Env & Energy	Pollet	Monitoring	Neutral

Incorporating comprehensive measurements of greenhouse gas emissions from certain fossil fuels into state environmental laws.

Summary: Requires the department of ecology, in consultation with the utilities and transportation commission, the chair of the energy facility site evaluation council, the department of natural resources, and the department of commerce, to adopt a rule to establish an upstream emissions rate that incorporates production, gathering, processing, transmission, storage, and distribution emissions that occur before the end use of natural gas or final point of commerce for the natural gas in the state. Requires the energy facility site evaluation council, the department of ecology, and an air pollution control agency to: (1) Apply a natural gas upstream emissions rate and global warming potential consistent with the adopted rule mentioned above; and (2) Require a carbon dioxide mitigation plan to provide mitigation based upon the carbon dioxide equivalents associated with both the end use of the natural gas and the production, gathering, processing, transmission, storage, and distribution of natural gas consistent with the adopted rule. Requires the utilities and transportation commission, gas companies, and electrical companies to use a natural gas upstream emissions rate and global warming potential consistent with the adopted rule. Requires the study of environmental impact information for a proposed potential site to evaluate greenhouse gas emissions consistent with the adopted rule.

Bill	Topic	Committee	Sponsor	Priority	Position
HB 1625 (SB 5816)	**Utility rate making/property**	H Rules R	Fitzgibbon	Medium	Support

Clarifying the valuation and determination of used and useful property for rate making purposes.

Summary: Authorizes the utilities and transportation commission, in determining the fair value for rate-making purposes of the property of a public service company, to include in the valuation, consideration of the property of the public service company acquired or constructed by or during the rate effective period to the extent that the commission finds that the inclusion is in the public interest and will yield fair, just, reasonable, and sufficient rates.

Bill	Topic	Committee	Sponsor	Priority	Position
SHB 1642	**On-bill repayment programs**	H Rules R	Doglio	Monitoring	Neutral

Allowing the energy savings associated with on-bill repayment programs to count toward a qualifying utility's energy conservation targets under the energy independence act.

Summary:

Bill	Topic	Committee	Sponsor	Priority	Position
HB 1664 (Dead) (SSB 5336)	**Electric transportation**	H Env & Energy	Slatter	Monitoring	Neutral

Advancing electric transportation.

Summary: Provides a sales and use tax exemption on electric vehicles. Requires the department of ecology to adopt the zero emission vehicle program regulations contained in Title 13, section 1962, 1962.1, and 1962.2 of the California Code of Regulations. Declares an intent to provide clear authority for utilities to engage in and promote the build out of electric vehicle infrastructure. Requires utilities that are traditionally responsible for providing electric service to customers and for understanding and engineering the electrical grid for safety and reliability to be engaged in the electrification of the transportation system. Authorizes certain cities or towns that are engaged in the generation, sale, or distribution of energy to, for its customers: (1) Assist in financing materials and equipment for the electrification of transportation; and (2) Offer programs, services, or investments in the electrification of transportation in a way that benefits ratepayers. Permits an electric utility to submit an electrification of transportation plan, to the utilities and transportation commission, that deploys electric vehicle supply equipment or provides other electric transportation programs, services, or incentives to support electrification of transportation. Creates the electric vehicle account.

HB 1862 (Dead) (2SSB 5223)	**Electrical net metering** Concerning net metering. *Summary:* Modifies certain net metering of electricity provisions regarding the cumulative generating capacity available; unused kilowatt-hour credits used to assist qualified low-income residential customers; and kilowatt-hours of electricity consumed for the most recent twelve-month period required on customer billing statements. Requires the state building code council, in consultation with the department of commerce and local governments, to conduct a study of the state building code and adopt changes necessary to encourage greater use of renewable energy systems. Requires the department of commerce to convene a work group to identify issues and laws associated with the future of net metering. Provides a June 30, 2021, expiration date for the work group.	H Env & Energy	Mead	Monitoring	Neutral
2SHB 2117 (SB 5973)	**State tax structure** Providing a pathway to modernize and rebalance the Washington state tax structure so that it is equitable, adequate, stable, and transparent for the people of Washington state. *Summary:*	H Rules R	Frame	Monitoring	Neutral
HJM 4000 (SJM 8005)	**Biochar** Supporting the continued research, development, production, and application of biochar from our forests and agricultural lands. *Summary:* Supports the continued research, development, production, and application of biochar from our forests and agricultural lands.	H 2nd Reading	Shea	Monitoring	Neutral
SB 5108 (Dead) (HB 1070)	**Natural gas tax treatment** Concerning the tax treatment of renewable natural gas. *Summary:* Provides a public utility tax exemption on the sale by a gas distribution business of renewable natural gas. States that the sale of natural gas, including compressed natural gas and liquefied natural gas used or sold to manufacture transportation fuel, and renewable natural gas by a gas distribution business, are not exempt from business and occupation taxes under certain circumstances.	S Environment, E	King	Monitoring	Neutral
E2SSB 5116 (2SHB 1211)	**Clean energy** Supporting Washington's clean energy economy and transitioning to a clean, affordable, and reliable energy future. *Summary:*	S Passed 3rd	Carlyle	High	Concerns
SB 5118	**Self-generated electricity** Concerning the right to consume self-generated electricity. *Summary:* Prohibits an electric utility from establishing compensation arrangements or interconnection requirements, other than those permitted in chapter 80.60 RCW (net metering of electricity), for a customer-generator that would have the effect of limiting the ability of a customer-generator to generate or store electricity for consumption on its premises.	S 2nd Reading	Palumbo	Monitoring	Neutral

SB 5129 (HB 1343)	**Revenue**	S Ways & Means	Rolfes	Monitoring	Concerns
	Increasing revenues for the support of state government.				
	Summary: Imposes a tax on individuals for the privilege of selling or exchanging long-term capital assets or receiving Washington capital gains. Allows a business and occupation tax deduction against a person's gross income of the business to the extent necessary to avoid taxing the same amounts under chapter 82.04 RCW and section 102 of this act. Authorizes the department of revenue to enter into reciprocal tax collection agreements with the taxing officials of any other state imposing a specified tax. Increases the business and occupation tax rate on certain services.				
SB 5134 (HB 1102)	**Capital budget 2019-2021**	S Ways & Means	Frockt	Monitoring	Neutral
	Concerning the capital budget.				
	Summary: Funds capital projects.				
SB 5145	**Hydraulic fracturing**	H RDev, Ag&NR	Salomon	Monitoring	Neutral
	Concerning the use of hydraulic fracturing in the exploration for and production of oil and natural gas.				
	Summary: Prohibits the use of hydraulic fracturing in the exploration for and production of oil and natural gas.				
SB 5153 (HB 1109)	**Operating budget 2019-2021**	S Ways & Means	Rolfes	High	Neutral
	Making 2019-2021 biennium operating appropriations.				
	Summary: Makes 2019-2021 biennium operating appropriations.				
SB 5154 (HB 1108)	**Supp. operating budget 17-19**	S Ways & Means	Rolfes	Medium	Neutral
	Making 2017-2019 biennium second supplemental operating appropriations.				
	Summary: Makes 2017-2019 biennium second supplemental operating appropriations.				
SB 5191 (Dead) (SHB 1222)	**PUD contracting**	S Local Governmen	Takko	Monitoring	Neutral
	Concerning public utility districts' contracts for work or materials.				
	Summary: Addresses a public utility district's contracts for work or materials.				
SB 5214 (HB 1160)	**Transportation budget 19-21**	S Transportation	Hobbs	Monitoring	Neutral
	Making transportation appropriations for the 2019-2021 fiscal biennium.				
	Summary: Makes transportation appropriations for the 2019-2021 fiscal biennium.				
	Electrical net metering	S 2nd Reading	Palumbo	Monitoring	Neutral

2SSB 5223 (HB 1862)	Concerning net metering. *Summary:*				
2SSB 5293 (2SHB 1257)	**Energy efficiency** Concerning energy efficiency. *Summary:*	S Rules 2	Carlyle	Monitoring	Concerns
SB 5329 (SHB 1332)	**Energy site eval. council** Concerning updating and streamlining energy facility site evaluation council operations. *Summary:* Streamlines and updates the operations of the energy facility site evaluation council.	S 2nd Reading	Nguyen	Monitoring	Neutral
SSB 5336 (HB 1664)	**Electric transportation** Advancing electric transportation. *Summary:*	S Transportation	Palumbo	Medium	Concerns
SB 5347 (Dead)	**Electric utilities/climate** Concerning claims about climate change made by electric utilities. *Summary:* Prohibits an electric utility from advertising or offering a benefit, program, or service in terms indicating that the benefit, program, or service will slow or stop, or in any similar way affect, climate change.	S Environment, E	Ericksen	Monitoring	Neutral
SB 5561 (Dead) (HB 1549)	**Greenhouse emissions eval.** Directing the department of ecology to adopt a rule governing the evaluation of greenhouse gas emissions under chapter 43.21C RCW. *Summary:* Requires the department of ecology to: (1) Adopt a rule establishing the process by which lead agencies evaluate environmental impacts of greenhouse gas emissions when conducting environmental review of project and nonproject actions under the state environmental policy act; and (2) Before adopting the rules, engage in government-to-government consultation with Indian tribes.	S Environment, E	Takko	Monitoring	Neutral
SSB 5588	**Hydrogen production & sale** Authorizing the production, distribution, and sale of renewable hydrogen. *Summary:*	H Env & Energy	Hawkins	Monitoring	Neutral
SB 5629 (Dead)	**Small modular reactors** Promoting small modular reactors in Washington.	S Environment, E	Brown	Monitoring	Neutral

Summary: Retains and/or increases the number of jobs in the small modular reactor industry. Encourages eligible investment projects that use or produce small modular reactors or other green technologies. Provides a business and occupation tax exemption on the manufacture or sale at wholesale or retail of small modular reactors.

SB 5747 **(Dead)**	**Solid waste/renewable energy** Studying the use of solid waste to produce renewable energy. *Summary:* Declares an intent to: (1) Support the burning of solid waste to produce renewable energy; and (2) Appropriate sufficient money to carry out the purposes of this act. Requires the department of ecology and the utilities and transportation commission to submit a report to the legislature examining opportunities, and making recommendations, for expanding the use of waste-to-energy plants.	S Environment, E	Fortunato	Monitoring	Neutral
SB 5804 **(Dead)** **(HB 1863)**	**Ag., food, nat. resource ed.** Concerning agriculture, food, and natural resource education. *Summary:* Establishes a career-connected learning opportunity in the agriculture, food, and natural resource career cluster area as a career and technical education program in the office of the superintendent of public instruction.	S EL/K-12	Warnick	Monitoring	Neutral
SB 5816 **(HB 1625)**	**Utility rate making/property** Clarifying the valuation and determination of used and useful property for rate making purposes. *Summary:* Authorizes the utilities and transportation commission, in determining the fair value for rate-making purposes of the property of a public service company, to include in the valuation, consideration of the property of the public service company acquired or constructed by or during the rate effective period to the extent that the commission finds that the inclusion is in the public interest and will yield fair, just, reasonable, and sufficient rates.	S Rules 2	Carlyle	Medium	Support
SSB 5963	**State budget outlook** Requiring the state budget outlook to include an inflationary increase to the cost of employee and provider salaries, wages, and rates. *Summary:*	S Rules 2	Rolfes	Monitoring	Neutral
SB 5971	**Transportation funding** Concerning transportation funding. *Summary:*	S Transportation	Hobbs	High	Oppose
SB 5972	**Additive trans funding** Concerning additive transportation funding and appropriations. *Summary:*	S Transportation	Hobbs	Monitoring	Neutral
	State tax structure	S Ways & Means	Wellman	Monitoring	Neutral

SB 5973 **(2SHB 2117)**	Providing a pathway to modernize and rebalance the Washington state tax structure so that it is equitable, adequate, stable, and transparent for the people of Washington state. *Summary:*				
SJM 8005 **(HJM 4000)**	**Biochar**	H RDev, Ag&NR	Short	Monitoring	Neutral
	Supporting the continued research, development, production, and application of biochar from our forests and agricultural lands. *Summary:* Supports the continued research, development, production, and application of biochar from our forests and agricultural lands.				
SGA 9253	**DAVID DANNER**	S Confirmed		Monitoring	Neutral
	Summary: DAVID DANNER, reappointed January 02, 2019, for a term ending January 01, 2025, as Chair of the Utilities and Transportation Commission.				

Alliance of Western Energy Consumers

Impacts of Cap-and-Trade Program (HB 2020)

About the Alliance of Western Energy Consumers (AWEC): AWEC is a non-profit organization comprised of the largest and most innovative employers in the northwest. AWEC has a large and diversified membership that represents industries such as agriculture, aeronautics, air products, pulp and paper, food processing, information technology, healthcare and more. AWEC works to ensure employers have access to affordable, reliable electricity and natural gas.

In Oregon, AWEC members employ over 50,000 Oregonians in their 73 facilities across the state. In many cases, AWEC members are the major employer in their community.

Impacts of HB 2020 on AWEC Members

- Even though AWEC members' facilities are responsible for only a small amount of greenhouse gas (GHG) emissions, HB 2020 will impose disproportionate costs on AWEC members. **We estimate the cumulative compliance and energy cost impacts on AWEC facilities will exceed $350 million by 2030 and rise to over $1.5 billion in 2040.**
- **HB 2020 will increase the costs of electricity and natural gas to all consumers, including AWEC members facilities.**

AWEC Members' GHG Emissions

- AWEC members' facilities are a small contributor to Oregon's GHG emissions.
- Of the total GHG emissions covered by HB 2020's cap and trade regulation (52.6 million MTCO2e), AWEC members' 12 covered facilities contribute only 1.57 million metric tons to Oregon's covered emissions.
- Most AWEC member facility emissions are not covered in HB 2020. Total emissions from these plants represent less than 310,000 MTCO2e or .6 percent of Oregon's total emissions.

EITE AWEC Members

- 12 AWEC facilities are designated as EITE and initially receive no-cost allowances to offset the costs of compliance. However, the distribution of allowances is reduced each year starting in 2022. AWEC facilities need to buy allowances to comply with the regulation starting in 2022.
- AWEC members' covered facilities are responsible for less than 3 percent of Oregon's statewide GHG emissions, but they would be required to pay many millions of dollars in compliance costs each year. Compliance costs for those 12 facilities are estimated to be at:
  - $7.1 million by 2025
  - $37.3 million by 2030
  - $70.6 million by 2035
  - $106.8 million by 2040

- The cumulative costs of these 12 AWEC facilities purchasing allowances is estimated to exceed $4.1 million by 2025 and grow to over $1 billion by 2040.

- Compliance costs identified above do not include indirect electricity cost increases.

AWEC Indirect Costs – Electricity

- All AWEC member facilities, even those designated as EITE, are exposed to electricity price increases in either the near- or long-term.

- The cost impact will vary by company depending on their electricity provider. Direct Access Customers get hit the hardest – because their wholesale electricity suppliers don't get the same allowances that IOUs receive – even though they are required to meet the same RPS requirements.

- Price impacts will begin immediately for AWEC members on direct access, amounting to $4.3 million in 2021 alone. Increased electricity costs for all AWEC electricity customers increase sharply in later years as free allowances decline.

  - $4.3 million in 2021
  - $7.5 million in 2025
  - $11.2 million in 2030
  - $16.4 million in 2035
  - $25.5 million in 2040

AWEC Indirect Costs – Natural Gas

- AWEC member facilities not covered by HB 2020 may be significantly impacted by higher natural gas costs if they are ineligible for free allowances. The cost of allowances will be passed on through higher natural gas costs that affect 25 percent, or 5.8 MMBtu, of natural gas consumed by AWEC members facilities.

- Natural gas prices are estimated to increase 29 percent in 2021. By 2030, industrial customers will see a 60 percent increase in natural gas prices.

  Increases in natural gas costs for AWEC members will be immediate and are estimated to increase each year the cap and trade regulation is in place.

  - $6.7 million in 2021
  - $11.3 million in 2025
  - $21.9 million in 2030
  - $26.7 million in 2035
  - $33.7 million in 2040

- Between 2021 and 2040 estimates show that AWEC members will spend an addition $410 million in increased natural gas costs due to HB 2020.

Conclusion – Impacts on AWEC Members

The economic impacts and job losses to AWEC members and communities will likely be significant as a result of HB 2020, as production in these facilities is curtailed and shifted to lower cost states.

HB 2020 Oregon Cap and Trade Fact Sheet

NWGA NORTHWEST GAS ASSOCIATION

The proposed HB 2020 legislation would have significant and lasting impacts on natural gas rate payers. Customers from all rate classes would experience rapid and increasing costs for simply heating their homes and businesses. The chart below shows the weighted average rate impact for all residential and commercial customers in Oregon, as well as by each of the three LDCs.

HB 2020 Natural Gas Customer Rate Impacts

	2021	2025	2030	2035
Statewide Weighted Average				
Residential	12%	16%	25%	40%
Commercial	14%	18%	29%	46%
Avista				
Residential	19%	21%	31%	48%
Commercial	18%	18%	27%	56%
Cascade				
Residential	12%	19%	33%	46%
Commercial	15%	23%	40%	46%
NW Natural				
Residential	11%	15%	23%	38%
Commercial	13%	17%	27%	44%

Oregon's Natural Gas System

The current HB 2020 proposal gives free credits to Oregon's electric utilities in recognition of prior legislatively mandated green initiatives. It treats the the more than two million Oregon residents and businesses who rely on natural gas for warmth, comfort and productive energy differently, ignoring the strides that Oregon LDCs and their customers have made in reducing emissions through system maintenance, modernization and efficiency initiatives. Consider:

- Emissions from residential and commercial* use of natural gas make up about 6% of total statewide GHG emissions according the Oregon Greenhouse Gas Sector-Based Inventory
- Emissions from residential and commercial use of natural gas have increased only 2 percent since 2000. Oregon has added more than 200,000 new natural gas homes (41% increase) and almost 20,000 new businesses (23% increase) over the same period.
- Each Oregon home heated by natural gas emits 29% less carbon than it did in the year 2000. Each commercial natural gas customer emits 19% less carbon than in 2000.
- We burn more natural gas in Oregon to generate electricity than homes and commercial entities combined use directly to heat space and water.

These achievements are not the result of legislation, but that does not make them any less real, nor reduce the commitment required by families, businesses and LDCs to see them through.

Conclusions

HB 2020 as currently composed is punitive to Oregon's natural gas customers and unfair. The state is already seeing emissions reductions from the transition to and increasing reliance on natural gas as a cleaner, reliable fuel for generating electricity. The state is also seeing significant emissions-related benefits by virtue of the highly efficient direct use of natural gas for residential and commercial space and water heat. All natural gas utility customers should receive a fair share of allowances to mitigate rate impacts.

**The commercial sector includes businesses (e.g. restaurants, breweries, laundromats, etc.), buildings and institutions (e.g. schools, universities, hospitals, etc.) that use natural gas for space and water heat.*

OREGON CARBON POLICY OFFICE

Summary of Core Elements of the Oregon Climate Action Program

Program element	Description
Statewide GHG goals & cap	
New statewide GHG goals	2035: 45% below 1990 emission levels 2050: 80% below 1990 emission levels
Establishment of cap	Places an overall limit across regulated sectors to achieve the state's greenhouse gas goals. The cap declines each year by a constant tonnage amount to achieve a 45% reduction from 1990 levels by 2035, and an 80% reduction below 1990 levels by 2050.
Program coverage	
Gases covered	Greenhouse gases covered include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride and nitrogen trifluoride. The program covers anthropogenic greenhouse gases, which excludes carbon dioxide from certain biofuels (ethanol, biodiesel) and biomass.
Sectors covered	Fossil fuels: All fossil fuels distributed in Oregon, including natural gas, gasoline, diesel and propane Electricity: All electricity generated in Oregon, and electricity imported for use in the state Industrial processes: Landfills and specific manufacturing processes that emit GHGs as a byproduct, including manufacture of cement, pulp and paper products, iron and steel, certain chemicals.
Regulated entities	Emissions from fuels such as gasoline, diesel, and propane will be regulated at the companies importing the fuels for distribution within Oregon. Emissions from natural gas will be regulated at the natural gas utilities for their direct sales to residential, commercial, or industrial customers. Emissions from natural gas sold by marketers and distributors will be regulated at those companies, not at the utility. Emissions from electricity generated in Oregon will be regulated at the generating facilities. Electricity imported for use in Oregon will be regulated at the entities scheduling this power for delivery in the state. Large industrial entities with reported emissions > 25,000 tons will be directly regulated for their process related emissions and natural gas emissions. Emissions from the gas that serves these entities will be subtracted from the emissions obligation of the natural gas utility or marketer that serves them. Public universities or Oregon Health and Science University that exceed the 25,000 ton threshold for direct regulation are not directly regulated by the program. However, this gas would still be covered by the program at the utility or other entity that supplies that gas.

Exemptions & exclusions	The following entities are exempted from being covered by the program: • Landfills closed before the effective date of the bill • A consumer-owned utility, or entity scheduling imported electricity on behalf of a consumer owned utility in cases where the emissions from that imported electricity have averaged less than 25,000 tons/year over the past three years • Entities importing less than a small amount of gasoline and diesel fuel – this amount to be determined in rulemaking The following emissions are excluded from being covered by the program: • Methane emissions from a landfill that are captured and used to created renewable energy • GHG emissions from combustion of municipal solid waste to create renewable energy • GHG emissions from generation of electricity in Oregon that is delivered to consumers in another state for which the capital and fuel costs are included in the rates of a multi-state utility • GHG emissions from fuels used in aviation, watercraft, or locomotives There is also a temporary exclusion for fluorinated gases generated from semiconductor manufacturing. This exclusion extends through January 1, 2026.
	Direct distribution of allowances
Investor-owned utilities	2021 – 2030: Direct allocation to these companies will follow a forecast of emissions from electricity to serve their retail customers. This forecast will be based on data in the most recent plan acknowledged by the Public Utility Commission or an update to the plan, as of January 1, 2021. 2031 – 2050: Direct allocation to these companies will decline at the same annual decline as the program's overall cap, beginning from the allocation made in 2030. Allowances distributed to IOUs can be used for compliance with emissions associated with their Oregon load, or can be monetized to the benefit of the utility's customers. This will be overseen by the Public Utiilty Commission.
Public power	2021: Direct allocation to entities scheduling electricity for COUs equal to a forecast of emissions in 2021 based on a representative years' emissions. 2022 – 2050: Decline from the amount of allowances allocated in 2021 at the same annual decline as the program's overall cap. Allowances distributed to COUs can be used for compliance with emissions associated with their Oregon load, or can be monetized to the benefit of their customers, as overseen by their boards.
Natural gas utilities	Direct allocation to these companies in an amount needed to cover emissions associated with service to their low-income residential customers. This amount will be determined every three years in consultation with the Public Utility Commission.

Emissions Intensive, Trade Exposed Facilities	Directly regulated entities operating in sectors identified as emissions intensive, trade exposed, will receive a direct output-based allocation of allowances based on an initial benchmark. They will receive allowances equal to 100% of the benchmark and the allocation will decline each year at the same rate as the overall rate of decline of the economy-wide cap.
Additional set-asides	
Price containment reserve	Each year, an amount of allowances to be determined in rulemaking will be distributed to a price containment reserve. See the following section on how this price containment reserve would operate.
Voluntary renewable electricity	Allowances may be set aside to account for the voluntary renewable electricity market for new facilities begin operations on or after January 1, 2021.
Electricity price containment reserve	Each year, an amount of allowances to be determined in rulemaking will be distributed to an electricity price containment reserve. Allowances in this reserve will be used to moderate electricity price increases from unexpected increases in emissions that are outside the control of utilities, such as extreme variability in hydroelectric output.
Emissions Intensive, Trade Exposed Process Reserve	Each year, an amount of allowances to be determined in rulemaking will be distributed to an account for emissions intensive, trade exposed entities that experience significant changes to the emissions or their competitive environment. These allowances would also be accessible for direct allocation to new or expanded industrial manufacturing that is identified as emissions-intensive, trade exposed.
Market Design	
Auction	After directly allocating allowances to entities and setting allowances aside in reserve, the state will distribute the remainder of allowances at regular auction. Entities interested in acquiring these allowances can register with the state to participate in the auction and make bids at the auction to purchase them. This distributes allowances to those entities that value them the most.
Price "floor"	The state auction will include a minimum price that the state is willing to sell the allowances made available at the auction.
Price "ceiling"	The state auction will also include a maximum price that allowances can be sold.
Price containment reserve auctions	The state will make available allowances set aside in the allowance price containment reserve for sale at predetermined price points between the price floor and ceiling.
Banking	Entities are able to bank allowances for use in future compliance periods.
Compliance	For each three year compliance period, entities must submit allowances equal to their total emissions over the three years at the end of each compliance period.
Offset credits	
Concept	Offset credits represent emission reductions from sources not covered by the cap. They can be used for compliance for a portion of a regulated entity's compliance obligation. Offset projects must result in greenhouse gas emissions reductions or removals that are real, permanent, quantifiable, verifiable, enforceable, and not otherwise required by law;

	and are in addition to any other greenhouse gas emissions reductions or removals that would otherwise occur.
Restrictions on use	Using up to 8 percent offsets for compliance is subject to the following conditions: • *Geographic Limits*: Offset project must be located in the United States or a jurisdiction with which the state has agreed to link. • *Air Quality Limits*: The number of offset credits that a regulated entity can submit may be limited if that entity is located in an impacted community and a non-attainment area (significant air quality challenges) or is in violation of their air quality permit. • *Direct Environmental Benefits*: At least 4 percent of the offsets used for compliance by a regulated entity must have a direct environmental benefit in Oregon.
Oregon-specific offsets	The state will develop offset protocols to fit the needs for Oregon natural and working lands. The state will investigate opportunities to aggregate offset credits to allow smaller landowners to participate in offset projects and investigate offset projects that reduce methane emissions from agriculture.
Agency and Public Input	In developing offset protocols, the agency will work closely with the Department of Agriculture, Board of Forestry, Environmental Justice Task Force, and the Oregon Watershed Enhancement Board, and will convene an advisory committee on the development of offset protocols.

Davison Van Cleve PC
Attorneys at Law
TEL (503) 241-7242 ● FAX (503) 241-8160 ● jdw@dvclaw.com
Suite 450
1750 SW Harbor Way
Portland, OR 97201

MEMORANDUM

Attorney/Client Privilege

March 6, 2019

TO: John Carr; BPA Members

FROM: Josh Weber

RE: March BPA Update

---

1. BP-20 Proceeding

On Monday, January 14, 2019, the Bonneville Power Administration ("BPA") released its Initial Proposal in the BP-20 rate proceeding. BPA has proposed a 2.9% average power rate increase, which is substantially lower than the approximately 5% increase that was initially contemplated by BPA Staff. Further, since the rate increase is distributed more towards billing elements that apply to requirements customers, many slice/block customers could experience a rate reduction. This is a favorable proposal for our members.

On February 19, 2019, two days before intervenor testimony was due, BPA announced on a Financial Reserves conference call that it has discovered persistent errors in its accounting that reach back at least as far as 2004. These errors have led to an apparent misallocation of reserves between the Power and Transmission business lines. BPA believes that Power reserves have been understated by as much as $200 million, not including interest. It is unclear how this will affect power rates, but it would seem that at the very least, application of the Financial Reserves surcharge to power customers should be reevaluated. The Financial Reserves surcharge represents $20 million of BPA's current rate structure and is currently projected to increase to nearly $30 million in the BP-20 rate period.

While it is highly disturbing that an accounting error of this magnitude has persisted for at least 15 years, the Administrator and senior management at BPA have stated that they are determined to treat this issue in a transparent and timely manner. A customer meeting is scheduled for March 11, 2019. We expect that the parties will have the opportunity to fully explore potential ramifications for BPA's power and transmission rates during this

process. However, it is still unclear how this process will interface with the ongoing BP-20 forum, or whether it will be handled entirely in a separate proceeding.

AWEC filed testimony on February 21, 2019, focusing on other potential opportunities for cost savings identified in the Initial Proposal, which include: 1) termination of the Foote Creek 1 PPA; 2) an alternative approach to BPA's minimum required net revenue practices; 3) potential adjustments to BPA's surplus firm capacity forecasts; 4) investigation of BPA's proposed calculation of net secondary revenues; and 5) potential ways for incremental revenues to be returned to BPA customers in the event BPA joins the western energy imbalance market.

With respect to transmission rates, AWEC has supported the BP-20 Partial Rates Settlement Agreement, which limits BPA's transmission rate increases to 4.2% for point-to-point transmission and 2.5% for network transmission, or approximately 3.6% overall – a significant reduction from the 10%-11% overall increase BPA had planned to propose.

2. BP-20 Settlement Proposal

On approximately January 31, 2019, the Western Public Agencies Group ("WPAG") sent a letter to BPA proposing that the parties to BP-20 meet to discuss settlement of the power rates issues, with a goal achieving a zero-percent overall rate increase. BPA responded, noting that given the timing of the case, the rates issues raised by WPAG were likely best addressed in the rate case process. However, following a letter of support from the Eugene Water and Electric Board, BPA invited rate case participants to meet on February 28 to discuss possible settlement.

During this meeting BPA offered to accept some more aggressive marketing of excess firm energy (which AWEC, WPAG, and others had suggested in testimony) to settle the case, if the parties would agree to that the Financial Reserves surcharge would operate separately, once uncertainty regarding financial reserves is straightened out. The reduction floated by BPA would reduce the rate increase by about ½ of a percent but would not result in a zero-percent increase, even absent a Financial Reserves surcharge.

Generally, this proposal did not lead to a great deal of enthusiasm among Public Power representatives because it is unclear whether this proposed settlement would be better than a litigated outcome, particularly as markets continue to move, which will affect BPA's final modeling. Additionally, until it is clear how BPA intends to handle any questions regarding the misallocation of financial reserves, even parties who proposed settlement are now wary of settling the rate case.

AWEC indicated that it is amenable to considering BPA's proposal, though but it is necessary to first get a better feel for a likely litigated outcome, and to attend the upcoming March 11 meeting with BPA finance before a final recommendation can be made.

3. TC-20 Terms and Conditions Settlement

While a single joint party objected to certain provisions of the BP-20 Partial Rates Settlement and the TC-20 Settlement Agreement, BPA issued a recommendation to the Administrator to approve the stipulation, which includes the BP-20 Partial Rates Settlement. The Hearing Officer certified the TC-20 record for the Administrator's final decision on February 20, 2019. Concurrent with this writing, the Administrator released a record of decision ("ROD") on March 1, 2019, adopting the settlement. While it appears that the BP-20 rate settlement was not officially included in this ROD because it is not within the scope of BP-20, we expect that it will be adopted in BP-20, because its adoption is a material term of the TC-20 settlement. We will analyze this ROD and present further information at the March 6 meeting.

4. Grid Modernization

BPA continues to meet with customers regarding its Grid Modernization initiative. Central to this effort is the proposal that the BPA balancing authority area consider joining the CAISO energy imbalance market ("EIM"). BPA is discussing operational aspects of this proposal, and will present cost/benefits analyses as well, as it determines whether to move forward. Notably, BPA is studying what changes to the EIM market would be necessary to ensure that hydro resources with their unique characteristics would be dispatched wisely and economically.

AWEC MEETING
PORTLAND GENERAL ELECTRIC COMPANY UPDATE
CONFIDENTIAL
FOR MEMBERS ONLY
DO NOT DISTRIBUTE
MARCH 6, 2019

2018 General Rate Case (Docket No. UE 335)

- The Oregon Public Utilities Commission ("OPUC" or "Commission") issued a final order in PGE's 2018 rate case on December 14, 2019 approving all of the stipulations filed in the case. The rate elements of the decision are positive. Schedules 89 and 90 received rate decreases, for the second year in a row, of approximately 2%. This decrease compares to an overall rate increase of approximately 1%. Direct access customers also realized substantial decreases to their delivery charges. In addition, through a separate settlement, PGE also agreed to pass back tax savings in 2018 it incurred from changes to the federal tax rate over the next two years, which will further reduce rates by approximately 1.5% in each of these years.

- This result for large customers incorporates a number of proposals AWEC made in testimony. This includes adjustments to capital additions, employee counts, deferred income taxes, power costs, and rate spread. In total, AWEC filed five pieces of testimony in the docket, leading to favorable settlements on all revenue requirement issues. In addition, other than direct access (discussed below) the Commission ruled against PGE, and in favor of AWEC, on the few contested issues, including allowing the Company to establish a balancing account for major storm costs.

- AWEC did not agree to settle issues related to PGE's long-term direct access program, which allows customers to select an alternative energy supplier on a permanent basis. PGE agreed to a settlement with other parties that maintained the existing cap on the program, despite the fact that this cap excludes certain otherwise eligible customers and has never been justified. AWEC objected to this stipulation, therefore, on the grounds that it discriminated against the customers it excluded. The OPUC nevertheless approved it. In doing so, however, the Commission provided no factual basis for its decision. Accordingly, AWEC has filed for reconsideration of this decision. PGE, OPUC Staff, and Calpine Solutions all filed responses supporting the Commission's original order. An order on AWEC's petition is due April 15, 2019.

2018 Renewables Request for Proposals ("RFP") (UM 1934)

- Following acknowledgment of its 2016 integrated resource plan ("IRP"), PGE issued an RFP for approximately 100 average MW ("aMW") of new renewable resources. As discussed in previous updates, AWEC had opposed this acquisition in the IRP on the basis that PGE had no need for new renewable resources. This opposition helped to

reduce the amount the Commission acknowledged from 175 aMW to 100 aMW. AWEC also opposed the results of PGE's RFP on the grounds that it was uncompetitive and yielded resources of questionable value to customers. Only three viable bids were identified in the RFP. One was PGE's benchmark bid, part of which would be utility-owned. The other two were power purchase agreements with third-parties. Following announcement of the results, one PPA bid withdrew, leaving only two viable bids.

- Nevertheless, but not unexpectedly, the OPUC acknowledged PGE's final shortlist in its 2018 renewable RFP at its December 4, 2018 open meeting. Subsequently, PGE announced on February 12, 2019 that it would move forward with a deal to develop its benchmark bid, the Wheatridge Renewable Energy Facility ("Wheatridge"). Wheatridge will be co-owned by NextEra and PGE, and includes a mix of solar, wind, and battery resources. According to PGE, the other remaining bid withdrew during the negotiation phase, meaning that PGE's own resource was ultimately the only viable resource identified in the RFP. AWEC will fully participate in the subsequent proceeding in which PGE seeks cost recovery.

Green Tariff (Docket No. UM 1953)

- On April 13, 2018, PGE filed a proposal for a "green tariff" option for its large customers. Our previous updates have covered the details of the Company's proposal. In short, subscribers would remain on their cost-of-service tariff, but would also be charged a separate rider covering the cost of a new renewable resource.

- Parties filed briefing in this proceeding in December 2018, and have been waiting for a Commission order ever since. The wide variety of proposals made in this case is likely contributing to the length of time it is taking the Commission to issue an order in this case, as the Commission may be taking pieces of parties' proposals to craft its own green tariff for PGE. One of the Commissioners, Letha Tawney, has extensive experience with green tariffs through her prior job at the World Resources Institute, and is likely using that experience to influence the order.

New Load Direct Access ("NLDA") Tariff (Docket No. ADV 919)

- As discussed in our PacifiCorp update, the OPUC has adopted rules governing an NLDA program in which new loads over 10 aMWs for which PGE and PacifiCorp have not planned, may go straight to direct access while paying a reduced transition charge. Unlike PacifiCorp's tariff, which was relatively uncontroversial and has already been approved, PGE's tariff filing in compliance with the NLDA rules seeks to implement two new charges that PGE claims are necessary to maintain system reliability and fairly allocate costs.

- The first charge, which PGE has called a "resource adequacy charge," would represent the cost PGE incurs to acquire additional capacity to have in reserve in the event that

NLDA customers return to PGE's service on an emergency basis. PGE claims that, without this additional capacity, it may be unable to acquire sufficient energy to serve all of its customers, forcing it to curtail cost-of-service customers. The other charge, which PGE has called the "resource intermittency charge," is intended to compensate for real-time balancing PGE does when energy service suppliers do not accurately schedule to serve direct access loads (although this charge would only apply at this time to NLDA loads because PGE agreed to abandon this charge in the direct access settlement in the rate case). Even though PGE already collects imbalance charges through its open access transmission tariff, the Company claims that these charges only account for imbalance energy, and not the capacity associated with it. AWEC intends to oppose both charges on numerous grounds, including that they represent plant not used and useful, are not the least-cost solution to PGE's alleged problems, and represent issues PGE litigated in the NLDA rulemaking and lost.

AWEC MEETING
PUGET SOUND ENERGY UPDATE
CONFIDENTIAL
FOR MEMBERS ONLY
DO NOT DISTRIBUTE
MARCH 6, 2019

PSE Expedited Rate Filing (UE-180899, UG-180900)

- PSE made an "expedited rate filing" ("ERF") on November 7, 2018. While the Washington Utilities and Transportation Commission ("WUTC" or "Commission") has approved ERFs in the recent past, no rules or other guidance exist governing what may or may not be included, other than a long-standing rule that any rate increase to any customer class of 3% or more constitutes a general rate case; consequently, it has generally been agreed that ERFs must seek rate increases of less than 3% to provide for a more streamlined and faster approval process than occurs with a general rate case. To meet this requirement, PSE requested an overall increase to gas rates of 2.9%, while arguing that it could justify a much higher increase. Notably, however, the Company's request masked higher rate increases to transportation customers of up to 6% by bundling its transportation rate schedules with their sales schedule counterparts (in other words, customers on Schedule 87 and 87T, for instance, were grouped together as a single customer class). PSE sought a relatively modest increase to electric customers of less than 1%.

- Parties held settlement discussions in January, which led to a full settlement on January 30, 2019. The settlement maintains existing electric rates, thereby eliminating approximately $19 million from the Company's request, and authorizes a 2.9% overall gas rate increase. At AWEC's insistence, however, PSE agreed to also limit the rate increase for all transportation schedules to 2.9%. The settlement also preserved for litigation in a future rate case all remaining portions of the tax savings associated with the Tax Cuts and Jobs Act that PSE is deferring. This includes most excess deferred income tax (EDIT) savings and the "current" (i.e., non-EDIT) tax savings PSE incurred from January through April of 2018.

- On February 21, 2019, the Commission approved the settlement, but subject to a condition. The Commission found that, while continued deferral of EDIT-related tax savings was justified due to the complexity associated with calculating this savings, PSE had not justified continuing to defer the January through April 2018 current tax savings. Consequently, the Commission required PSE to amortize this savings over a 12-month period beginning May 1, 2019. This will result in an additional $24 million in savings

passed through to electric customers over this period, and $10.5 million for gas customers. Both represent rate decreases of over 1%.

Sale of Macquarie Interest (Docket U-180680)

- As discussed in our previous Member Update, Macquarie Infrastructure Partners, the majority shareholder in PSE's parent company, Puget Holdings, has announced that it intends to sell its 44% share of the company to a consortium of pension funds. PSE filed for approval of this sale with the WUTC on September 5, 2018. While Commission Staff recommended approval of the transaction at an open meeting on November 5, 2018, after having issued only five data requests, AWEC and others successfully influenced the Commission to open an adjudication to allow for a more comprehensive review the transaction. Our previous updates have provided additional background on this case.

- On January 15, 2019, AWEC and most other parties entered into a multiparty settlement imposing a number of conditions that will help protect ratepayers. These conditions, which include debt reporting and governance conditions, are in addition to those PSE is already subject to from the 2007 transaction when Macquarie purchased the utility.

- The only parties opposing the settlement are several labor groups who appear to be using the merger docket to collaterally attack PSE's most recent collective bargaining agreement, which is outside of the WUTC's jurisdiction. PSE successfully moved to strike most, but not all, of the labor organizations' testimony in opposition to the settlement. A hearing was held on February 15, 2019. Only the labor groups conducted cross examination, and the Commissioners asked no questions. An order on the settlement is forthcoming.

Schedule 258 Changes

- PSE has informed AWEC and its Conservation Resource Advisory Group that it intends to make several small, but beneficial, changes to Schedule 258, its self-directed energy efficiency program for large customers. In short, PSE is proposing to allow customers to use their allocated funds to pay for energy efficiency engineering studies to help identify cost-effective energy projects. PSE hopes that this change will help provide customers with more efficiency project options and encourage greater use of the Schedule 258 funds prior to the competitive phase of the program.

AWEC MEETING
GENERIC PROCEEDINGS UPDATE
CONFIDENTIAL
FOR MEMBERS ONLY
DO NOT DISTRIBUTE
MARCH 6, 2019

<u>Oregon Proceedings</u>

Investigation into the Legal Authority to Defer Capital Costs (UM 1909)

- As discussed in our last Member Update, on October 29, 2018, the Oregon Public Utilities Commission ("OPUC" or "Commission") issued a final order finding that it lacks the legal authority to authorize deferral of either the return on, or the return of, capital investments. As a reminder, this docket was originally opened because Commission Staff was of the opinion that the Commission could authorize deferral of the return of capital investments, but not the return on those investments.

- Since our last Member Update, the utilities filed a motion for reconsideration, which the OPUC subsequently denied on February 19, 2019. The OPUC determined that its earlier analysis was correct, but it also ordered a new investigation to "address options for the recovery of capital costs consistent with our legal authority." AWEC will participate in this proceeding. We believe it is likely that the utilities will either seek judicial review of this decision or a legislative fix, or both.

Renewable Portfolio Standard Rulemaking (OPUC Dockets AR 610, AR 616, and AR 617)

- The OPUC has been engaged in a series of rulemakings to update its rules governing renewable portfolio standard ("RPS") compliance following passage of the 50% RPS in 2016. This has been a very slow-moving rulemaking which has not been assisted by the fact that the staff lead on the rulemaking has changed at least twice with frequent turnover at the Commission.

- Nevertheless, this rulemaking has the potential to have significant consequences for the cost impacts of the RPS. Most notably, the RPS contains a cost cap whereby a utility is relieved of its compliance obligation if the incremental cost of compliance exceeds four percent. To date, this cost cap has been implemented by reviewing the utilities' historical cost of compliance through the retirement of RECs, rather than their projected compliance cost. The consequence of this is that customers are not protected by the cost cap because it is only reviewed after the costs are incurred. AWEC first identified this

problem in PGE's 2015 RPS compliance report, and has been raising this issue consistently ever since.

- It appears that the utilities and Staff agree with AWEC on this point, but the slow-moving process of this rulemaking has thus far prevented this necessary change. As the utilities' RPS compliance obligations increase, this issue will become more pressing, so AWEC will continue to push for its implementation.

Investigation into PURPA Implementation (OPUC Dockets UM 2000 and UM 2001)

- On February 14, 2019, the OPUC adopted Commission Staff's recommendation to open yet another broad investigation into implementation of the Public Utility Regulatory Policies Act ("PURPA"). The OPUC has been consistently investigating PURPA for well over a decade. This investigation was opened primarily due to PGE's concerns over the past two years that it is being required to pay more than avoided cost for QF power and is unable to revise its rates to align them with the avoided cost. This has led to a swarm of QFs seeking contracts with PGE, and the utility has warned that these QFs could result in millions in increased costs to customers. AWEC has generally supported PGE's efforts to reduce its avoided cost rates and has intervened in the proceeding. No schedule has been adopted.

Washington Proceedings

Rulemaking on Integrated Resource Plans ("IRP") (WUTC Docket U-161024)

- The Washington Utilities and Transportation Commission ("WUTC" or "Commission") is revisiting its rulemaking regarding the State's integrated resource planning ("IRP") process. Recent Staff and utility proposals have discussed the creation of a competitive bidding process similar to Oregon's.

- AWEC filed its most recent comments on January 31, 2019. As with previous AWEC comments, AWEC recommended against creating a detailed competitive bidding process, arguing that these procedures rarely deliver any value for customers despite significant costs, which are ultimately borne by ratepayers.

- While AWEC opposes Staff's proposed rules, AWEC has also provided detailed comments to protect ratepayers to the maximum extent possible in case the WUTC chooses to adopt a new competitive bidding process. In its most recent comments, AWEC focused on provisions regarding the use of an independent evaluator. Generally, AWEC argued that competitive bidding processes should not include an independent evaluator unless the process allows for a utility ownership option.

- This rulemaking also includes discussion of a number of other IRP-related issues, including distribution system planning and PURPA. The distribution planning rules have stalled for now, but the Commission recently released its updated PURPA rules on February 22, 2019. These rules are set for an adoption hearing on April 30, 2019. Comments are due on April 1st. The rules make some substantial changes to the WUTC's existing PURPA policy, most notably by providing standard contracts for qualifying facilities ("QFs") with nameplate capacities up to 5 MW, and standard pricing for up to 15 years, and at least 12 years. Currently, standard contracts are only available to QFs up to 1 MW, and the rules do not specify the length of time for standard pricing. The existing rules have severely restricted QF development in Washington; the new rules may create a more favorable environment for these projects. AWEC continues to review the rules and will determine whether to comment.

Cost of Service Collaborative (WUTC Docket UE-170002)

- The WUTC opened an investigation into potential changes to its methodology for calculating cost of service for the State's utilities. We have provided additional background on this process in prior updates. Because changes in cost of service methodologies can have significant impacts on customer rates, AWEC is actively participating in this docket to try to influence the WUTC to adopt methodologies that are fair to large customers.

- Workshops were held to discuss electric- and gas-specific issues on February 21 and 22, 2019, respectively. At the electric workshop, Staff provided high-level straw proposals for how to allocate the various costs of utility service and requested feedback. While consensus was reached on a few categories of costs, there was general agreement that the discussion needed to get much more detailed to move the discussion along on more controversial cost categories like generation and transmission.

Alternative Ratemaking Workshop (WUTC Docket U-180907)

- On December 10, 2018, the WUTC held a workshop to hold a preliminary discussion on alternative forms of ratemaking. In essence, the WUTC was interested in hearing from stakeholders whether, given advances in technology and changes to the utility industry, the long-standing ratemaking construct in which utilities earn a return on their investments following a prudence review remains the most effective form of regulation. AWEC attended the workshop, along with all of the utilities, Public Counsel, the Energy Project, NIPPC, and others.

- At the workshop, the WUTC determined that the first step in this process should be to have stakeholders provide problem statements discussing their concerns with utility regulation and the principles that should guide it. AWEC's comments focused on the importance of establishing a clearly defined scope and goal for the docket to ensure that all stakeholders are working from a common framework. AWEC strongly recommended that, regardless of whether it regulates under a traditional or alternative form of regulation, the WUTC continue to be an economic regulator that is dedicated to ensuring fair, just, reasonable, and sufficient rates for the specific services a utility provides.

Regional Process

Statewide Energy Efficiency Advisory Group ("SWAG")

- AWEC continues to push back against WUTC Staff's efforts to expand the scope of the SWAG far beyond its original purpose of determining how to account for Northwest Energy Efficiency Alliance savings in utilities' energy efficiency targets. Since our last update, the SWAG has discussed potential "incentive mechanisms" to encourage utilities to adopt new conservation measures. AWEC's position is that because Washington's utilities are already required to acquire all cost-effective conservation, no "incentive" is needed to encourage further conservation measures.

- While it is not clear what the end result of the SWAG's process will be, AWEC remains engaged because Staff's various proposals could significantly increase utility conservation costs, and thus rates for AWEC members.

Pierce County Superior Court Case No. 17-2-08907-4 – TPU/Click! Litigation

- AWEC members with facilities serviced by Tacoma Public Utilities ("TPU") are presently participating in a joint litigation effort to stop TPU's long-running subsidization of its public broadband service, which operates under the name "Click!" Specifically, through voluntary, individual member funding (i.e., not via general AWEC membership contributions), AWEC is one of several named parties in a 2017 suit against the City of Tacoma ("City") in Pierce County Superior Court (the "Superior Court"). Our previous updates have provided additional background on this lawsuit.

- After the Superior Court ruled in the plaintiffs' favor in March 2018, the City appealed to the Washington Court of Appeals. After being granted three separate extensions, the City finally filed its opening brief on January 4, 2019. AWEC and its litigation partners will file a reply brief on March 6, 2019. There is no timeline for the Court of Appeals to issue a decision.

AWEC MEETING
PACIFICORP UPDATE
CONFIDENTIAL
FOR MEMBERS ONLY
DO NOT DISTRIBUTE
MARCH 6, 2019

Revised Depreciation Rates (OPUC Docket UM 1968; WUTC Docket UE-180778)

- As discussed in our last Member Update, PacifiCorp has filed an application to implement revised depreciation rates for each of the states it serves, including Washington and Oregon. The depreciation study would result in significant rate increases (between 5% and 10%) if implemented as filed.

- In early February 2019, PacifiCorp informed stakeholders that intended to seek a stay of its depreciation proceedings in each of its states to account for preliminary results from its 2019 integrated resource plan. Those results show that retiring a number of coal units earlier than anticipated would be economic for customers. These results need to be refined to account for any reliability impacts that would result from closing these coal plants, but if the results hold, then that could provide a basis for further accelerating the depreciable lives of these plants. Given the uncertainty surrounding the remaining lives of the Company's coal fleet, no party, including AWEC, objected to delaying the depreciation study until release of the final study results. Both the Oregon Public Utilities Commission ("OPUC") and Washington Utilities and Transportation Commission ("WUTC") have approved the requests to hold their respective proceedings in abeyance.

Multi-State Process ("MSP") Workgroup Meetings

- Since the November member meeting, two MSP workgroup meetings have been held, one on December 5th and 6th in Portland, and another on January 31st and February 1st in Denver. The Commissioner Forum was also held on February 1st, in which commissioners from each of PacifiCorp's states attend to receive an update on the meetings.

- For much of 2018, little progress was made, primarily due to the states' unwillingness to accept PacifiCorp's CLEAR proposal, and PacifiCorp's unwillingness to accept any proposed alternatives. Prior to the December meeting, however, the Oregon parties (Oregon Staff, AWEC, and CUB) held a meeting to attempt to identify a consensus position on the Company's proposal that they could present to the workgroup. That meeting led to an alternative concept to PacifiCorp's CLEAR plan.

- As a reminder, the CLEAR plan would assign each coal and gas unit in PacifiCorp's fleet to individual states. Because the cost of each unit differs, PacifiCorp would also create

"transition adjustments" in which states receiving lower cost units would pay states receiving higher cost units in order to bring each state back to the revenue requirement they would have paid absent this realignment. This presented a host of problems. First, it required states to accept all risk in the near-term of units they were receiving without sufficient knowledge of their viability. Second, the transition adjustments were calculated by forecasting the states' revenue requirement under the current 2017 protocol through 2030, and then discounting it back to present value. Not only were the transition adjustment payments almost guaranteed to be wrong, therefore, they also brought states back to revenue requirement under a cost allocation protocol that not all of them accepted.

- The Oregon concept solves for each of these problems. Rather than realigning all of the Company's coal units in the near term, any coal units that are forecasted to fully depreciate in all states before 2030 would continue to be treated as system resources. If they retire at the end of their depreciable lives, then all states would equitably share in the decommissioning and remediation costs. Any coal units that are scheduled to depreciate in Oregon before 2030, but in other states after 2030 would be treated as system resources until they are fully depreciated in Oregon. At that point, they would automatically transfer, without any transfer payments, to any other state that wishes to continue operating them. Oregon would pay no further costs, and receive no further benefits from these resources. In exchange, once the units did retire, Oregon would also have no additional decommissioning and remediation cost responsibility. All existing non-coal resources would remain system resources.

- The Oregon concept reduces states' risk by avoiding a near-term wholesale realignment of resources. It also avoids the need for a complicated and speculative transition adjustment by ensuring that any transfer of coal resources will only occur after the state from which the resource is transferred has already paid its fair share for that resource. The Oregon parties proposed this concept at the December meetings, and much of the January/February meetings was dedicated to discussing it. It appears that PacifiCorp and the other states are open to this concept, which represents the most progress the workgroup has made in at least a year. Nevertheless, much remains to be done, and it is questionable whether full resolution is possible by the end of 2019. Additional meetings are scheduled for March 6th and 7th in Salt Lake City, April 16th and 17th in Boise, and May 22nd and 23rd in Portland.

Oregon-Specific Interstate Cost Allocation Investigation (OPUC Docket No. UM 1824)

- This docket was originally opened nearly two years ago to consider Oregon-specific cost allocation issues outside of the broader MSP process. We have provided background on the docket in prior updates.

- OPUC Staff gave a presentation to the OPUC at its January 15, 2019 Public Meeting. The presentation amounted to a briefing for the Commissioners as to potential Oregon-specific cost allocation methods, but it did not contain any recommendations. Staff stated that it intends to conduct a "thorough quantitative evaluation to determine the merits" of various

cost allocation methods, but provided no information about when (or how) it intends to accomplish this. No additional substance has occurred or is projected to occur at this time.

2019 Renewable Adjustment Clause (OPUC Docket No. UE 352)

- On December 28, 2018, PacifiCorp filed an application to update its renewable adjustment clause ("RAC"), which allows it to include renewable resources used to meet Oregon's renewable portfolio standard in rates as soon as new resources are online, instead of waiting until its next general rate case.

- PacifiCorp's RAC filing was precipitated by its decision to "repower" nearly 1000 MW of company-owned wind capacity by upgrading turbine blades and other components. These upgrades will come online in two batches, with cost recovery proposed to begin on October 1, 2019 and December 1, 2019. Cumulatively, these projects would add $36.8 million to Oregon rates. PacifiCorp has stated that the average rate impact would be 2.8%, with customers on schedules 47 and 48 seeing increases of 3.6%. The impact of this should be offset by reduced power costs associated with higher capacity factors for the repowered resources, but whether PacifiCorp or customers take the risk that assumed capacity factors will be realized will be an issue in the case.

- AWEC is in the process of conducting discovery and identifying issues for its opening testimony, which is due on April 2, 2019.

New Load Direct Access Program (OPUC Dockets ADV 900 and UM 1989)

- As discussed in previous Member Updates, the OPUC recently adopted rules that allow new loads larger than 10 average MW coming to PGE's or PacifiCorp's service territories to go straight to direct access while paying a reduced transition charge. On December 14, 2018, PacifiCorp filed a new rate schedule implementing this new load direct access ("NLDA") program. The tariff was generally reflective of the new rules. Stakeholders held one workshop in which parties recommended a few minor revisions, which PacifiCorp accepted. The new tariffs were approved at the OPUC's February 26, 2019 open meeting.

- The OPUC's NLDA rules create a soft cap on the program at 6% of a utility's 2017 weather normalized annual load. Accordingly, PacifiCorp's NLDA program is limited to 89 average megawatts ("aMW"). A customer, however, may request to exceed this cap. This, in fact, occurred on the same day that PacifiCorp filed its NLDA rate schedules. Vitesse (a subsidiary of Facebook) filed an application to exceed the 89 aMW cap at a new data center in Crook County, Oregon. PacifiCorp has requested that, if the OPUC approves Vitesse's request, it add an extra 30 aMWs beyond what is needed by Vitesse, to ensure that more than one PacifiCorp customer can participate in the NLDA program. AWEC has intervened in this proceeding and is monitoring its progress.

AWEC MEETING
AVISTA UPDATE
CONFIDENTIAL
FOR MEMBERS ONLY
DO NOT DISTRIBUTE
MARCH 6, 2019

Avista/Hydro One Merger Case (WUTC Docket U-170970)

- On December 5, 2018, the Washington Utilities and Transportation Commission ("WUTC") issued an order rejecting Hydro One's proposed acquisition of Avista. Subsequently, on January 23, 2019, Avista and Hydro One announced that they would terminate the proposed merger. Surprisingly, all parties had come to support the proposed merger, but the WUTC rejected it anyway. The WUTC found that the proposed merger would not deliver net benefits to ratepayers, as required by state law.

- The WUTC cited potential interference from the Province of Ontario (Hydro One's largest shareholder) in Avista's affairs as the chief reason for its rejection of the proposed merger. These concerns arose after Doug Ford, Ontario's premier, ousted the entire Hydro One board and CEO. Despite this event, Hydro One continued to argue that Ontario did not control Hydro One and did not have the authority to influence the actions at Hydro One. The WUTC appears to have interpreted this as untruthfulness on the part of Hydro One's executives, as the final order is not kind to them. Hydro One's inability or refusal to level with the WUTC on this issue appears to have materially contributed to the WUTC's decision to reject the merger.

Power Cost Workshops

- As an outgrowth of Avista's most recent general rate case, stakeholders have been meeting to review Avista's modeling of its forecasted power costs, which in recent years have significantly over-forecast power costs. Our previous updates have provided additional background on these meetings and their origin.

- Two meetings have occurred since our last update. These meetings have resulted in Avista agreeing to change its power cost model from the AURORA model with numerous modifications and out-of-model adjustments that it currently uses to simply using the out-of-the-box AURORA model. This will simplify the audit of Avista's power costs in future rate cases, though whether it more accurately matches forecasts and actuals remains to be seen.

- While appearing to be more comfortable with this simplified approach, WUTC Staff continues to have questions and concerns about Avista's power cost modeling, so a full resolution of the issues has not yet occurred. Nevertheless, we expect Avista to file a rate case on or around April 1, 2019 and to use its new power cost methodology in that case.

M E M O R A N D U M

PRIVILEGED AND CONFIDENTIAL
PLEASE DO NOT DISTRIBUTE

TO:	John Carr, Executive Director, Alliance of Western Energy Consumers Ed Finklea, Director of Natural Gas, Alliance of Western Energy Consumers
FROM:	Chad M. Stokes Tommy A. Brooks
DATE:	March 1, 2019
RE:	Memorandum Summarizing State and Federal Issues for Natural Gas Members

---

Per your request, we have summarized the various state and federal issues impacting natural gas members for discussion during the Alliance of Western Energy Consumers ("AWEC") meeting on March 6, 2019.

Antitrust Statement

It is the policy of AWEC that the members shall not discuss prices, pricing policies, terms or conditions of the sale or distribution of products, volume of production or production quotas, allocation of territories or customers, boycotts of particular firms or products, or any other matter which might be considered a restraint on competition of any kind.

FEDERAL

1. Enbridge/Westcoast Pipeline

As members are aware, the rupture of the Enbridge/Westcoast Pipeline on October 9, 2018 caused interruptions in the days following the rupture and continues to impact gas service because Northwest Pipeline LLC ("Northwest Pipeline") has been operating under various stages of entitlements or operational flow orders. The Enbridge rupture occurred on its 36-inch pipeline eight miles north of Prince George, British Columbia and resulted in a loss of all Westcoast deliveries to Northwest Pipeline for gas day October 10, 2018, as both the 36-inch line and the

parallel 30-inch line were shut down for 36 hours. During the gas day of October 11, 2018, service was restored. The two Enbridge lines are currently operating, but at reduced pressure. As of February 29, 2019, the pipeline is operating under an operational flow order because T-South is operating at a significantly reduced capacity. At full capacity, the pipeline is capable of delivering 1.7 Bcf/day.

One of the biggest impacts to our members is that Northwest Pipeline has been operating under entitlements and local distribution companies have followed suit. During an entitlement period, the penalties relating to daily balancing can be severe. The problem was most severe on Puget Sound Energy's ("Puget") system before the tariff change that went into effect on March 1, 2019 discussed below, but all local distribution companies serving in the I-5 corridor have been operating under entitlements, and they anticipate doing so for an extended period of time.

The other implication of the reduced deliveries at Sumas has been that prices at Sumas, especially daily prices, have skyrocketed from time to time since the event. The high Sumas prices continue to impact transportation customers directly and will impact sales customers in the future, as the higher gas costs will be passed through the Purchased Gas Adjustment ("PGA") proceedings next year.

2. Northwest Pipeline (FERC Docket RP19-571)

On January 18, 2019, in Docket No. RP19-571, Northwest Pipeline filed with the Federal Energy Regulatory Commission ("FERC") an out-of-cycle fuel filing to increase the fuel factor from 1.00% to 1.61% for Northwest Pipeline's Transportation Rate Schedules TF-1, TF-2, TI-1 and DEX-1. This change was referenced in critical notice 19-004. Northwest Pipeline requested an expedited approval for this filing, which FERC granted. This revised fuel factor rate went into effect on February 1, 2019. Northwest Pipeline is expected to make another fuel filing this spring. This out-of-cycle filing is directly related to the Enbridge incident.

WASHINGTON

3. Puget Sound Energy Tariff Issue

Due to the pipeline rupture on Enbridge Pipeline, Northwest Pipeline has and continues to issue critical notices which have required in some cases immediate action from its customers. These critical notices include declaring force majeure, asking its customers to reduce loads, and imposing various stages of overrun entitlements. As expected, Puget has passed the entitlements to its customers.

As we discussed at the last meeting, Puget's tariffs related to entitlements and curtailments were a mess and very unfavorable to transportation customers. AWEC worked with Puget, Cost Management Services, IGI Resources, and WestRock's Bruce Martin to clean up Puget's tariffs so that the penalties for both overrun and underrun entitlements are appropriate. The main issue with Puget's tariffs is that they conflated a "curtailment" and an "entitlement." In the prior version of

the tariffs, during an overrun entitlement, volumes of gas delivered in excess of 103 percent (or other percentage determined by Puget) were to be billed at the unauthorized use of gas rate described in Section 7 of Rule 29. Section 7 of Rule 29 stated that "all gas used in excess of such curtailment will be billed at the applicable Rate Schedule No. 41 delivery and gas cost commodity rates; and, in addition, the Customer shall pay any applicable penalties as described in Rule 23." Rule 23 provided that the penalty for unauthorized use of gas during a curtailment period for the first 2 hours is $5 per therm, which increases to $10 per therm after the initial 2 hours. Further, Rule 23 provided that the customer is responsible for additional charges for penalties imposed by upstream transmission providers. In contrast, during an entitlement imposed by the interstate pipeline, which requires daily balancing, Northwest Pipeline's tariffs do not include the same level of penalties, which led to the conclusion that the penalties in Puget's tariffs were excessive. Northwest Pipeline imposes the following penalties for unauthorized overrun charges: the greater of $10 per Dth or 150 percent of the highest midpoint price at NW Wyo. Pool, NW s. of Green River, Stanfield Ore., NW Can. Bdr. (Sumas), Kern River Opal, or El Paso Bondad as reflected in the Daily Price Survey published in "Gas Daily."

Puget and AWEC negotiated for months over language to clean up the tariffs so that the penalty for overrun entitlements is consistent with the pipeline penalties, leaving in place the $10.00 per therm penalty only for violating a curtailment order. AWEC was also able to convince Puget to remove its ability to confiscate customer gas during an underrun entitlement, and to reduce the penalty to $1/therm, consistent with other utilities. The tariff changes were filed on January 25, 2019 and are effective as of March 1, 2019. Unfortunately, this change only corrects things going forward, so there could still be penalties for customers under the old tariff language.

4. NW Natural General Rate Case, Washington (UG-181053)

On December 31, 2018, NW Natural filed to increase its rates for distribution services in Washington. The filing seeks to increase revenues by $8.3 million, which is a margin increase of approximately 20 percent. NW Natural has also proposed an environmental cost recovery mechanism, and a mechanism that adjusts rates for the effects of the Tax Cuts and Jobs Act. AWEC has intervened, started its review of the filing, and issued an initial round of data requests. There is an initial settlement conference schedule on April 22nd and testimony is due on June 10th. We will have more to report at the next meeting.

5. Puget Sound Energy Expedited Rate Filing (UE-180899, UG-180900)

On November 7, 2018, Puget filed an expedited rate filing ("ERF"), requesting a rate increase of $18.9 million (.9 percent) for electric service and $21.7 million (2.7 percent) for gas service. In contrast to a general rate filing, an ERF allows for the cost recovery of certain types of expenses on an expedited basis so long as, in general, the rate impact is less than 3 percent.

To meet this requirement, although it stated that it could justify a much higher increase, Puget requested an overall increase to gas rates of 2.9%. In order to achieve this, however, Puget masked higher rate increases for transportation customers of up to 6% by bundling its transportation rate schedules with their sales schedule counterparts. Puget sought a relatively modest increase to electric customers of less than 1%.

Parties held settlement discussions in January, which led to a full settlement on January 30, 2019. The settlement maintains existing electric rates and authorizes a 2.9% overall gas rate increase. At AWEC's insistence, however, Puget agreed to also limit the rate increase for all transportation schedules to 2.9%. The settlement also preserved for litigation in a future rate case all remaining portions of the tax savings associated with the Tax Cuts and Jobs Act that Puget is deferring. This includes most excess deferred income tax (EDIT) savings and the "current" (i.e., non-EDIT) tax savings Puget incurred from January through April of 2018.

On February 21, 2019, the Commission approved the settlement, but subject to a condition. The Commission found that, while continued deferral of EDIT-related tax savings was justified due to the complexity associated with calculating this savings, Puget had not justified continuing to defer the January through April 2018 current tax savings. Consequently, the Commission required Puget to amortize this savings over a 12-month period beginning May 1, 2019. This will result in an additional $24 million savings passed through to electric customers over this period, and $10.5 million for gas customers.

6. Generic Cost of Service Docket (UG 170003)

Washington Staff continues to convene utilities and stakeholders to determine if there is a more consistent, agreed-upon methodology for utilities to use when conducting cost of service studies. On February 22, 2019, Washington Staff held a workshop to discuss several issues. In the near future, the Commission will issue a set of draft informal rules relating to gas cost of service. The purpose of the workshop was to provide input to Commission Staff that will be incorporated into those rules. There will likely be an opportunity in the future for AWEC and others to comment on the informal rules, and an additional process if the Washington Commission decides to begin the formal rulemaking process.

As part of this workshop and Washington Staff's overall approach to cost of service, it has been using the following guiding principles: (1) consider the direct allocation of costs where possible; (2) develop and rely on robust data; (3) strike a balance between the operation of a utility's system with the design of the utility's system; and (4) prioritize simplicity in any ultimate methodology. The third guiding principle is illustrative of the reason there have been disputes over cost of service in recent rate cases. AWEC's focus on the gas side has been to show that the cost of gas mains is highly correlated with the design of a system, which serves all firm customers under defined peak conditions. The Washington Commission's reliance on the "Peak and Average" methodology, however, places a large emphasis on how a system is operated under normal conditions (i.e. not on a design day), which has the result of favoring lower volume customers over large-volume customers when it comes to cost allocation of mains. By seeking to

"strike a balance" between those points of view, Washington Staff is signaling that it will continue to be unsupportive of a methodology that is based solely on design-day demand.

Of the specific issues for which Washington Staff sought feedback, most are not controversial, although the stakeholders continue to discuss what level of detail should be provided in a general rate case. For example, the Intangible Plant category can be large (Puget's total in this category approaches $100 million), but consists of thousands of relatively small line items comprising expenditures like software license orders. While there may be some major expenditures within this category, the utilities note that listing or otherwise trying to make sub-categories for every line item is inefficient and not very revealing. Staff, for its part, remains concerned that some of these items may be improperly allocated, especially if they are rolled up with other expenditures. This is an area where there is still no resolution and Washington Staff will likely have to present a more specific proposal that then gets modified by additional input.

The more controversial issue in cost allocation remains the allocation of mains. Although Commission Staff is aware of this controversy, its initial proposal is essentially to stick with the status quo and use a form of the Peak and Average methodology – an approach AWEC still opposes. Cascade's expert witness helpfully prepared a summary showing the difference between that methodology and four other methodologies, using Cascade's most recent general rate case as a case study. This included a comparison to the "Excess and Average" methodology and a "Design Day" methodology. The result of the comparison predictably showed that the Design Day approach favors large volume customers, the Peak and Average approach favors small volume customers, and the Excess and Average approach is somewhere in between.

In the spirit of compromise, AWEC has recently been advocating for a move to the Excess and Average approach. AWEC's expert has noted that this approach avoids the major pitfall of the Peak and Average methodology, which is to double count the "average" part of the equation because it takes throughput into account both as part of the peak and as part of the average. It also recognizes that all sizes of main, even those not used by large volume customers, contribute to overall system capacity. AWEC has also commented that, if the stakeholders cannot agree on a single methodology, a utility could submit a variety of cost of service methodologies and let parties to a rate case comment on which one results in the most appropriate outcome in a particular case. This approach would be similar to how cost of capital issues are litigated, with parties identifying a range of acceptable outcomes and the Commission making a final decision based on its determination of what is fair, just, and reasonable.

With the exception of Commission Staff, there seems to be broad consensus that the multi-methodology approach is the best approach. The utilities noted that it is not too burdensome to prepare and submit multiple cost of service proposals because the models are all fairly simple and rely on the same data.

Commission Staff is unlikely to hold additional workshops. We anticipate the next step in this docket will be the release of the informal draft rules, and we will report back when those informal draft rules are available.

7. Puget, Cascade, NW Natural, Avista Hedging Review (UG-132019)

On October 30, 2013, the Commission opened a Staff Investigation in Docket No. UG-132019 regarding policy issues related to the Washington natural gas utilities' hedging practices and transaction reporting. In UG-132019, the Commission issued a "Policy and Interpretive Statement on Local Distribution Companies' Natural Gas Hedging Practices" ("Policy Statement"). The Policy Statement outlines the process each local distribution company should follow in order to incorporate risk-responsive hedges into their individual portfolios. The Policy Statement required:

- Each company to submit, as part of the 2017 PGA filing, a preliminary hedging plan that outlines the company's intended path to incorporate risk-responsive hedging strategies for the upcoming year. This plan should articulate the company's hedging objectives and communicate its approach to address the basic elements of risk-responsive hedging: objectives and goals, exposure quantification, strategic initiatives, and oversight and control.

- Each company to submit annual comprehensive hedging plans that demonstrate the integration of risk responsive strategies into the Companies' overall hedging framework. As part of the comprehensive annual hedging plan, the Companies were required to incorporate a retrospective hedging report. This report was required to include a narrative of the utility's perspective on the execution of its prior year hedging strategy. Additionally, the report was required to include a discussion providing insight about whether the metrics and tolerances identified in the previous year's plan continue to be appropriate and how the Company's retrospective evaluation has informed modifications to the forthcoming year's hedging plan.

All Washington gas utilities are continuing to work on their hedging plans. On December 14, 2018, the Commission held a workshop for the utilities to present their current hedging plans, and changes that have been made to such plans to be consistent with the guidelines set forth in the Policy Statement. This workshop was timely, because the Enbridge incident brought renewed focus on the utilities' hedging practices and what lessons should be learned from the incident. The focus of the discussions was what the hedging plans are supposed to accomplish, whether they are working, and the changes that are required in the future. These workshops will continue until the utilities have a final hedging plan to present.

OREGON

8. NW Natural Rate Case (UG-344)

On December 29, 2017, NW Natural filed to increase its annual Oregon jurisdictional revenues by $52.4 million--a 15 percent margin increase. NW Natural filed a Long Run Incremental Cost ("LRIC") study with its case that it used to allocate the proposed rate increase to various rate schedules. Based in part on those results and to try to accommodate Staff and CUB,

NW Natural proposed to spread the increase on an equal percent of margin basis, even though some industrial customers should have received decreases. Oregon Staff performed its own LRIC study, which showed that industrial classes of customers are paying less than their cost of service, and proposed to allocate more costs to those schedules. NW Natural adopted Staff's position on rate spread, as did CUB. AWEC submitted its own testimony on rate spread and rate design showing that large gas users and transportation customers are subsidizing other classes of customers, and that Staff's cost of service study was flawed.

AWEC filed testimony addressing return on equity, revenue requirement, cost sharing from the Mist storage facility, LRIC, pension issues, and rate spread. AWEC also presented testimony to ensure that all the benefits of the Tax Cuts and Jobs Act are returned to customers, a position that NW Natural opposed.

The parties met on several occasions to discuss settlement. AWEC was able to settle most of the issues in the proceeding with Staff, CUB and NW Natural on favorable terms. The Parties agreed to an Oregon-allocated increase to revenues of $16,000,000 (down from the original $52,000,000), excluding the impact of certain contested issues. Prior to considering these other issues, this level of revenue increase would have resulted in a 4.6 percent margin increase to rates. This amount would be spread equally to all customer classes so that no customer class receives more of the increase than other customer classes.

While NW Natural, CUB and Staff entered into a Second Settlement to address several of the remaining issues in the docket, AWEC opposed the Second Settlement. The Second Settlement covered: (a) the treatment of the Company's $80 million pension balancing account and how to deal with pension expenses going forward; (b) the calculation and treatment of Excess Deferred Federal Income Taxes in the test period from the Tax Cuts and Jobs Act; and (c) the calculation and treatment of the Interim Period tax savings from the Tax Cuts and Jobs Act deferred over the period January 1, 2017 through the November 1, 2018. AWEC objected to the Second Settlement because there was no evidence in the record demonstrating that ratepayers are responsible for all of the amounts in the pension balancing account and AWEC disagreed with the Tax Cuts and Jobs Act adjustment proposed by NW Natural.

The Commission sided with AWEC and rejected the Second Settlement. The Commission ordered a Phase II for the docket to address the pension balancing account and the remaining tax issues.

After filing testimony in Phase II of UG 344, the parties met on several occasions to discuss settlement. As a direct result of AWEC's efforts, AWEC was able to settle the pension and tax issues with the parties on the following terms: (a) Applying $7.07 million of amounts deferred in the Interim Period Deferral, including interest, as an offset to the balance in the pension balancing account; and (b) Applying the $5.44 million of EDIT (Other Non-Plant) as an offset to the balance in the pension balancing account; and further reducing the pension balancing account balance by $10.5 million. NW Natural also agreed to reduce the interest rate on the pension balancing account from the Company's authorized rate of return, 7.317 percent, to 4.3 percent. Further, the

reductions described above were made effective as of October 31, 2018, eliminating millions in interest charges. If and when the Phase II settlement is approved, NW Natural will amortize the balance of the pension balancing account over a ten-year period by collecting $7.13 million per year from all customers on an equal percentage of margin basis through a separate tariff rider.

9. NW Natural Integrated Resource Plan (LC-71)

AWEC has been participating in NW Natural's 2018 Integrated Resource Plan ("IRP"). The areas of focus for AWEC were the distribution system upgrades proposed by NW Natural because such investments can be a significant driver in increasing customer rates. In the 2018 IRP, NW Natural proposed six pipeline reinforcement projects in Oregon which, combined, would cost between $45 and $65 million dollars. Due to the significant impact these projects would have on customer rates, NW Natural has the burden to demonstrate that all of the projects are needed. AWEC supported Staff's view that more information was needed to assess the need for the projects, but Staff changed its position at the last minute and argued that NW Natural had met its burden in its final report to the Commission.

The other area of focus was NW Natural's requested acknowledgment of its Renewable Gas Supply Resource Evaluation Methodology to evaluate Renewable Natural Gas ("RNG") resources against conventional sources of gas. In initial comments, both Staff and CUB were supportive of an RNG pilot program that would identify sources, technologies, and best practices that might be required to bring RNG onto the system. AWEC, on the other hand, argued that in light of the legislation currently being proposed in Oregon and sponsored by NW Natural, an RNG pilot program is premature. AWEC also had concerns about acknowledging a methodology, as opposed to a specific project, because this is not customarily done in integrated resource planning proceedings.

Senate Bill 98 ("SB 98") in the current legislative session proposes to allow Oregon gas utilities to voluntarily pursue purchases of RNG for their core customers as an alternative to traditional natural gas that is produced either from wells or from shale. In comments, AWEC did not oppose a voluntary effort to get biogas on the system to substitute for a portion of the portfolio currently used to serve core customers. AWEC did stress that the aggressive goals set forth in SB 98 may create an unrealistic expectation as to the degree to which renewable gas can replace traditional gas without simply driving up the overall cost of gas. AWEC also made clear that it is very concerned with proposals to authorize local distribution companies to spend up to 5% of their revenue requirement on infrastructure investments that would be used to connect renewable gas sources to the gas distribution grid, and to automatically pass through those costs through a tracking mechanism without the offsetting aspects of a general rate case. This would create an almost-guaranteed profit stream for the local distribution companies regardless of how they are managing the rest of their system. Such a remarkable increase in spending could occur year after year and will fall to the utility's customers.

While SB 98 is not the proposal in the IRP, AWEC had questions and concerns about the implications of acknowledging a "methodology" for future use without clear guidelines, goals, cost

limitations, and prudence reviews, and without knowing how that methodology will be incorporated into the changes in state law if SB 98 passes. AWEC argued that further detail of an RNG pilot program should be explored after the legislation session is completed. The Commission acknowledged NW Natural's 2018 IRP with the conditions supported by Commission Staff. AWEC will continue to monitor the RNG program.

10. Investigation of Authority to Defer Capital Costs (UM 1909)

As we previously reported, the Oregon Commission opened a generic docket to investigate the scope of its authority to defer capital expenses or revenues. All utilities intervened in the docket because it addresses the Commission's statutory authority and the resulting policy will be applicable to all utilities. ORS 757.259(2)(e), in relevant part, provides the Oregon Commission with authority to authorize the deferral of identifiable utility "expenses" or "revenues," the recovery or refund of which the commission finds should be deferred in order to minimize the frequency of rate changes or the fluctuation of rate levels, or to match appropriately the costs borne by ratepayers with the benefits received by ratepayers.

AWEC fully participated in this docket on both the gas and electric side. Participation in this docket was largely through briefs submitted in response to an opening brief by the Oregon Commission staff. AWEC submitted its brief jointly with CUB.

The Oregon Commission initiated this docket following a proposal by Portland General Electric to defer the revenue requirement associated with new plant that went into service after PGE's last rate case. PGE's proposal would have allowed it to begin accruing a return prior to a full determination by the Oregon Commission that the new plant is a legitimate part of the utility's operations. While AWEC believed PGE would likely be able to make the case that all or a portion of the expense of such a plant investment is warranted, it was AWEC's opinion that the deferral process short-circuits the traditional ratemaking process. The benefit of a deferral for PGE and other utilities is that it begins accruing a return on the increased cost it is experiencing for later recovery in rates. The benefit, however, occurs without taking into account any decreases in costs that could offset the increase and that would otherwise be revealed in a general rate case. AWEC recognizes that there may be a small delay between the period when a utility makes a large capital investment and when it begins recovering those costs in rates, but this regulatory lag is an accepted part of the traditional ratemaking process and utilities have other ways of managing those costs.

It was AWEC's, CUB's, and the Oregon Staff's position that the intent of the law authorizing deferrals is to create a limited exception to the normal ratemaking process by providing the Commission with authority to adjust rates when a legitimate ratemaking income or expense item is changing and when the Commission believes rates should be adjusted as a result at some later time. Without this authority, capturing past income and expense items in current or future rates would violate the rule against retroactive ratemaking. However, such deferrals should be used sparingly as an exception to traditional ratemaking and should not be as routine as PGE and the other utilities were advocating.

The Commission mostly sided with AWEC, CUB, and the Oregon Staff. The specific question presented in the docket was what type of revenues and expenses can be deferred, what the scope of the terms "revenues" and "expenses" includes, and what policy considerations the Oregon Commission should apply. The Commission flatly rejected the joint utilities' argument that any "cost" of doing business is necessarily an "expense" and, therefore, capable of deferral. Under the utilities' argument, because a utility's revenue requirement has certain costs imbedded in it, for example the cost of obtaining capital, even revenue requirement (which includes profit) would be capable of deferral. This argument was untenable to AWEC and ultimately to the Commission. When an expense is deferred, the utility accrues a return on that expense at its authorized rate until that amount is amortized into rates, at which time it begins earning a lower rate. A deferral of the revenue requirement associated with capital investments (which already includes a component of the utility's return on investment) would allow a utility to double up and effectively earn a return on its "return on investment."

The Commission's decision ultimately went beyond the position of all parties and concluded that the Commission had no authority to defer any costs associated with constructing an asset. The Commission based its decision on the "context" of the statute, concluding that the statutory language relating to deferrals must be viewed in the context of accounting principles. Based on that approach, the Commission then determined that costs associated with constructing an asset are not an "expense" under accounting principles, but instead are part of a utility's general ledger as Construction Works in Progress. As a result, the Commission concluded that such costs do not fall under the definition of "expenses" as that term is used in the deferral statutes.

This decision is a departure from earlier Commission decisions, most of which involved the approval of settlements allowing utilities to defer portions of capital investments. The Commission recognized the significance of this change and noted it impacts the methodologies currently used by PGE and PacifiCorp under ORS 469A.120 for costs associated with the Renewable Portfolio Standards. The Commission therefore directed Staff to lead an effort to modify those methodologies and reiterated that it would not approve such methodologies in settlement agreements going forward.

Not surprisingly, the utilities filed a motion for reconsideration or rehearing, which AWEC and CUB opposed. The Commission denied the motion for reconsideration or rehearing, but opened a separate investigation "to explore the implications of this decision, and to address options to address recovery of capital costs consistent with our legal authority and the public interest." AWEC will be involved in the new investigation.

11. Cascade Natural Gas Oregon Rate Case (UG 347)

On May 31, 2018, Cascade filed for authority to increase its rates by $2,310,808 or 3.53%. Before the case was filed, AWEC and other parties settled Cascade's ROE at 9.4 percent. AWEC identified several areas of concern with Cascade's filing, including the fact that the actual amount of the proposed increase is greater than it appears, because the increase is offset by the revenue

impact of approximately $1.5 to $2 million in Tax Cuts and Jobs Act adjustments. Further, Cascade's rate spread and rate design proposal was unacceptable because Cascade decided, without notice, to change Schedule 163 from interruptible to firm service. As a result, Schedule 163 would have received a 19.87 percent increase for general transportation service because those customers would be subject to capacity charges associated with firm service.

Cascade also proposed a safety tracker for immediate recovery of plant investments related to safety similar to Intermountain's failed proposal in Idaho. In its testimony, AWEC noted that programs like this are single issue ratemaking, which have all upside for the company, without looking at any factors which would offset the need for a rate increase to pay for the program. Utilities have an obligation to provide safe and reliable service, the costs of which are recovered in rate proceedings.

AWEC filed testimony arguing that Cascade's rate spread and rate design proposal was unreasonable, and that Cascade's revenue requirement was significantly overstated. AWEC also argued that customers should receive the benefits of the Tax Cuts and Jobs Act in rates, and Cascade should not be allowed to retain this money to bolster its earnings.

After a series of settlement conferences, the parties were able to reach a settlement, which provided for a revenue requirement increase of $1,175,000 (before considering all the impacts of the Tax Cuts and Jobs Act). Cascade agreed to withdraw its request to change Schedule 163 from interruptible to firm service in this case. Because Cascade was arguing that Schedule 163 should be treated as firm because those customers are never interrupted, we expect Cascade to bring this up again in future proceedings. AWEC indicated it would not object to a new firm transportation option for those customers desiring that level of service, but insisted on retaining interruptible service as an option. Cascade also agreed to remove the safety tracker proposal from the rate case and file it separately with the Commission. Finally, the parties will address the Interim Period tax savings from the Tax Cuts and Jobs Act in the Commission's ongoing tax docket UM 1922. We believe the Interim Period tax savings will further reduce rates between $500,000 and $1 million. The Stipulation and supporting testimony were filed in February. We are now waiting for an Order from the Commission.

12. Avista Tax Docket (UM 1918)

The income tax expense currently included in Avista's base rates was approved in its last general rate case (Docket UG 325) and does not reflect any of the tax benefits from the Tax Cuts and Jobs Act. At the February 14, 2019 public meeting, the Commission approved certain benefits from the Tax Cuts and Jobs Act being returned to customers. The money being returned to customers reflects the difference between the tax rate included for ratemaking purposes in UG 325 (35 percent), and the tax rate that exists now (21 percent). Beginning on March 1, 2019, for a period of 12 months, $3.837 million will be returned to ratepayers for a 12-month period on an equal percent of margin basis. Within each service schedule (i.e., rate design), the Company will apply a uniform cents per therm to the volumetric block rates by rate schedule.

13. Cascade Tax Docket (UM 1922)

AWEC continues to work with Commission Staff to ensure that all of the benefits of the Tax Cuts and Jobs Act are returned to ratepayers of Cascade. Cascade continues to argue that it should be allowed to retain some of the benefits of the Tax Cuts and Jobs Act if it is underearning, a position AWEC opposes. Cascade made a similar argument in Washington, but the Washington Commission sided with AWEC and ordered that all of the benefits of the Tax Cuts and Jobs Act be returned to ratepayers.

OREGON, WASHINGTON, IDAHO

14. Avista / Hydro One Merger

After the state utility commissions of Washington and Idaho rejected Avista's proposed merger with Hydro One Limited ("Hydro One"), the Oregon Commission dismissed the application.

Under the Agreement and Plan of Merger ("Merger Agreement") between Avista and Hydro One Limited, Hydro One Limited committed to pay Avista a fee of $103,000,000 in the event the Merger Agreement is terminated in certain circumstances, including when "Regulatory Approvals" required under the Merger Agreement have not been obtained. On January 23, 2019, Avista filed a notice in Docket UM 1897 stating that the parties to the Merger Agreement had terminated the merger. While customers are not entitled to that money, there is a certain amount of board, management, and employee time embedded in rates, and there is a strong argument that the board, management, and certain employees were focused more on the merger than typical operations. These issues will be explored in Avista's next rate case.

From: Kelly Francone

To: Aldis.Raisters@gapac.com; Alicia Fuentes; Alicia Givens; Amy Beck; Bernie McNamee; Bill Castleberry; Brad Beavers; Bradley Mullins; Brian Wood; Bruce Martin; Calli Daly; Calvin Greene; Charley Hathaway; Charley; Chris Horn; Courtney Smith; Craig Anneberg; Dan Coyne; David Barge; David Clemens; David Elliot; David Tobin; Delee Shoemaker; Dennis; Don Hendricksen; Donna Gehlhaart; Doug Krapas; Drew Bryck; Drew Gilpin; Ed Finklea; Fawn Barrie; Gary Londo; Graham Bailey; Graham Pickering; Greg Vaughn; Irene Plenefisch (LCA); Janese Pearson; Ponderay; Jeff Johnson; Jennifer; Jennifer Hackett; Jennifer Steiner-Burner; Jim Stanton; JL Wilson; John Bob; John Carr; Josh Weber; Justen Rainey; Keith Warner; kwilson@legadv.com; Ken Dey; Ken Johnson; Kenneth Li; Kevin Davis; Kevin Rasler; Khaly Niang; kristin.b.marshall@boeing.com; Larry Voos; Leslie Adams; lori@lorievans.us; Luke Hart; Marcie Peters; Ma; Mark Dunn; Mark Steele; Mark Steele; Marland Turner; Martha_C@columbiasteel.com; Marty Sedler; marycatherine.mcaleer@weyerhaeuser.com; Jeff Burks; Matt Upmeyer; Melissa Gombosky; Metrick Houser; Michael Culver; Michael Kuhn; Michael Kuhn; Michael Padgett; Mike Hale; Mitch Maynard; mruckwardt@schn.com; Kaiser, Nick; Noel Mak; mingon@ohsu.edu; Pat Ealy; Patrick Loupin; Pat Lydon; Pat Ortiz; Paul Langley; Phil Pesek; Ralph Saperstein; Randy Clancy; Raymond L. Beard; Richard White; Rob Buckingham; Rob Freres; Ryan Beaver; Ryan Spiller; Samantha Julian; Samuel Liebelt; Sandi Swarthout; Scott, Edgar; Scott Gutting; Scott Hawley; Scott Wagener; Skylar; Spiro E Xenos; Stan Jackson; Steven Castracane; Thomas Rozwood; Tim Boyd; Tim Root; todd.wiseman@solvay.com; tom@richlandpaper.com; Tom Yarborough; Tony Hardenbrook; Tyler Pepple; Tyne Brownlow; Wes.Hill@gapac.com; Wyatt Elbin; Beth@cmsnaturalgas.com; Chuck Gates; CMS@cmsnaturalgas.com; James_Clarken@oxy.com; jpino@uetllc.com; Nancy Holbrook; Nancy Hollbrook; randy.schultz@bp.com; rgreenwell@uetllc.com; [redacted]; rick.kunz@shell.com; Robert Pierce; Ted@cmsnaturalgas.com; teresa.acosta@calpinesolutions.com; Francone, Kelly

Subject: AWEC: Cost Impacts of OR Cap-and Trade Policy

Date: Wednesday, March 06, 2019 7:03:40 AM

Attachments: Costs Impacts of OR Cap and Trade_03062019_AWEC Mtg Powerpoint.pdf

---

AWEC Members,

Please find attached the Energy Strategies' study on the impact of Oregon's proposed Cap-and Trade policy. This impact study will be discussed at today's AWEC member meeting.

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

ENERGY STRATEGIES

Impacts of Oregon's Cap and Trade Regulation on Industry

Preliminary Analysis of the Direct and Indirect Cost Impacts of HB 2020 on AWEC Facilities

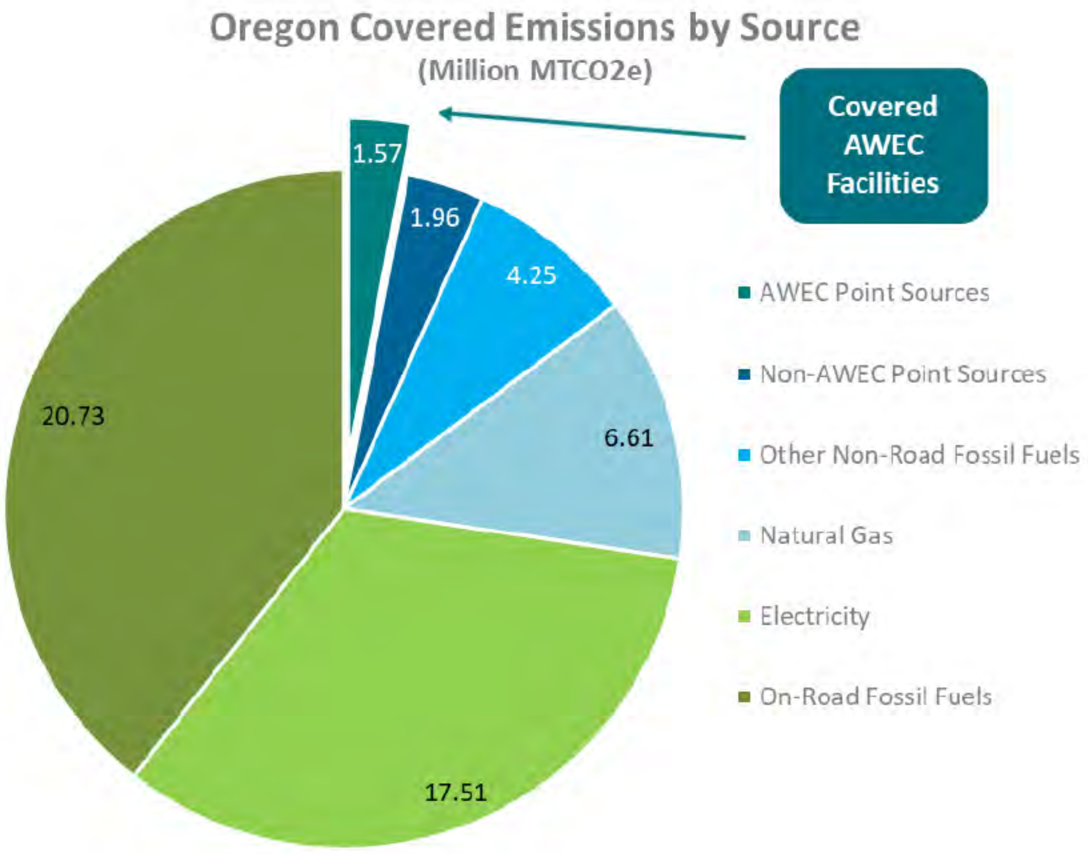
March 6, 2019

ENERGY STRATEGIES

AWEC Facilities and Emissions Covered by HB 2020

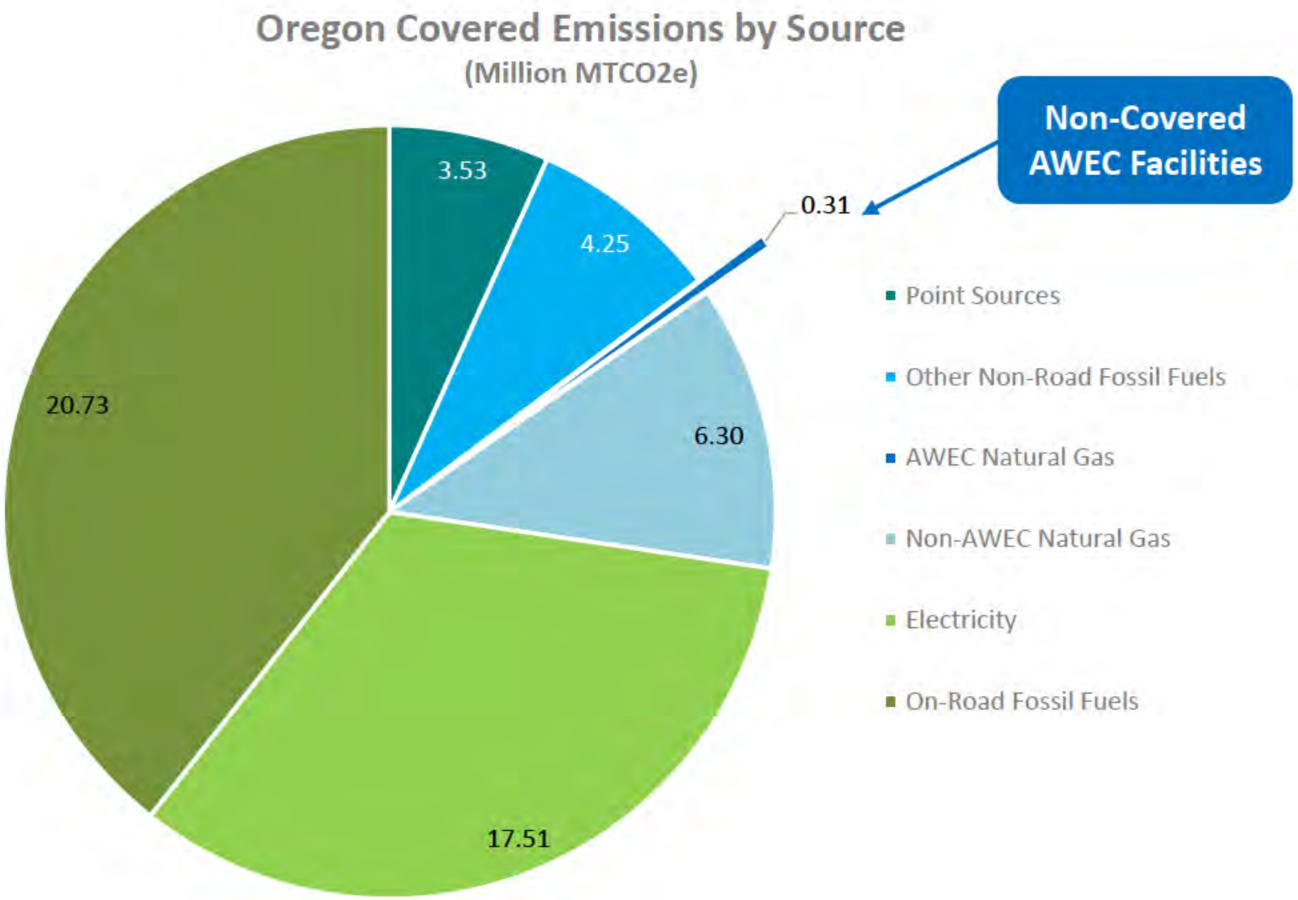
HB 2020's compliance requirements apply to all point sources that emit > 25,000 $MTCO_2e$

- Twelve AWEC member facilities' CO2e emissions exceed 25,000 metric tons and will be covered
- Emissions of covered Large Industrial Point Sources total 3.53 million metric tons and represents 6.7 percent of total covered emissions under the proposed cap and trade regulation
- AWEC's covered facilities' emissions total 1.57 million metric tons and represent a small portion, less than 3 percent, of total state-wide CO_2e emissions covered under HB 2020



Most AWEC member facilities emissions are not covered

- Sixty-one AWEC members' facilities will not be covered
- Total estimated emissions from these facilities represent less than 310,000 $MTCO_2e$ or 0.6 percent of the emissions covered by the proposed regulation
- AWEC facilities not covered by the regulation will be impacted indirectly through higher electricity and natural gas costs



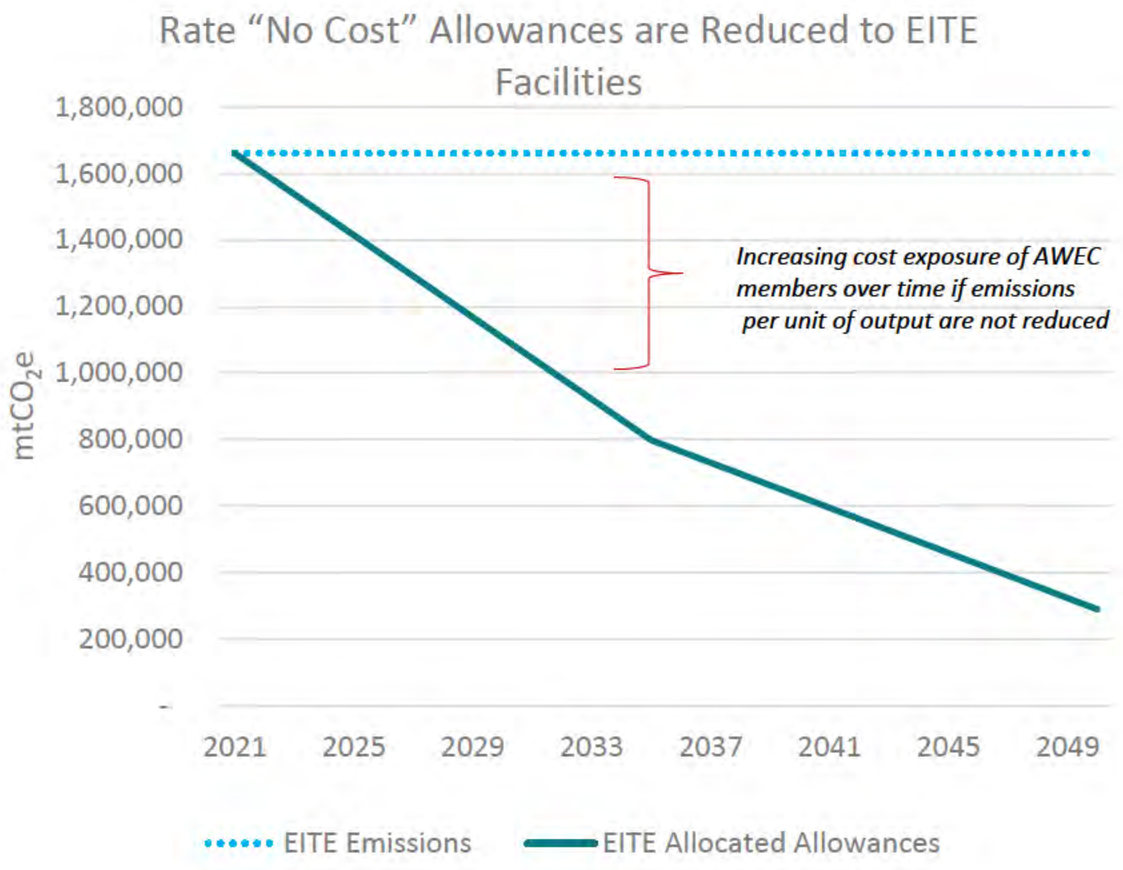
ENERGY STRATEGIES

Direct Compliance Cost Impacts

Covered AWEC Facilities

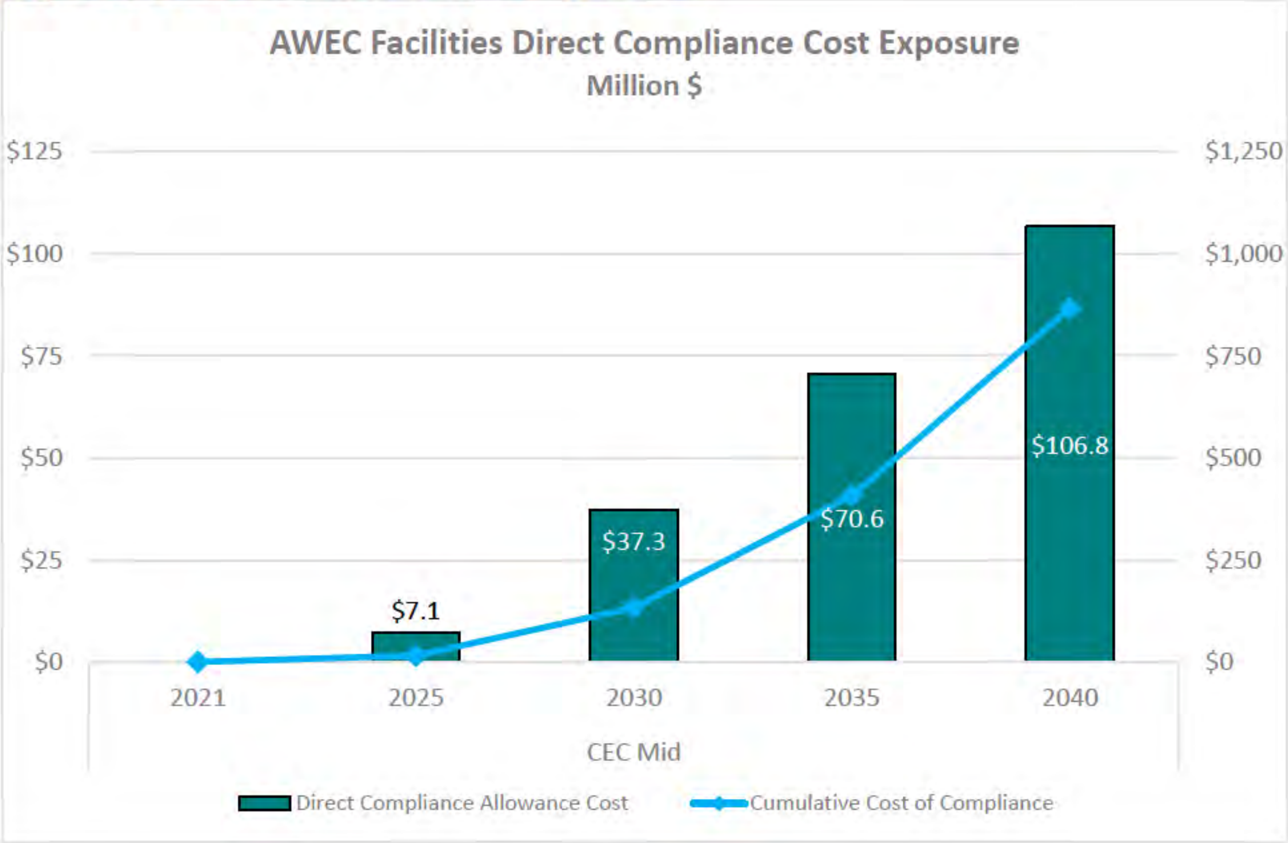
Covered facilities designated as EITE will receive 100% "no cost" allowances in 2021

- Twelve AWEC members' covered facilities are designated EITE
- Allowances will decrease annually starting in 2022 in proportion to the state-wide allowance budget
- As the number of no-cost allowances decline, facility compliance cost increases as the company will need to buy allowances at auction or in the secondary markets



Direct compliance costs will grow over time as the allocation of “no cost” allowances decreases

- Twelve AWEC members’ facilities will have no direct compliance costs in 2021 because of the distribution of “no cost” allowance
- Annual compliance cost for AWEC facilities will be low in the early years of the program but could grow to $107 million dollars per year by 2040
- AWEC members’ cumulative costs of purchasing allowances from 2021 to 2040 could be over $866 million



ENERGY STRATEGIES

Indirect Electricity Costs Impacts

Covered and Non-Covered AWEC Facilities

AWEC facilities receive electricity service from more than 13 electricity providers

Investor Owned Utilities

- Pacific Power and Light
- Portland General Electric

Consumer-Owned Utilities

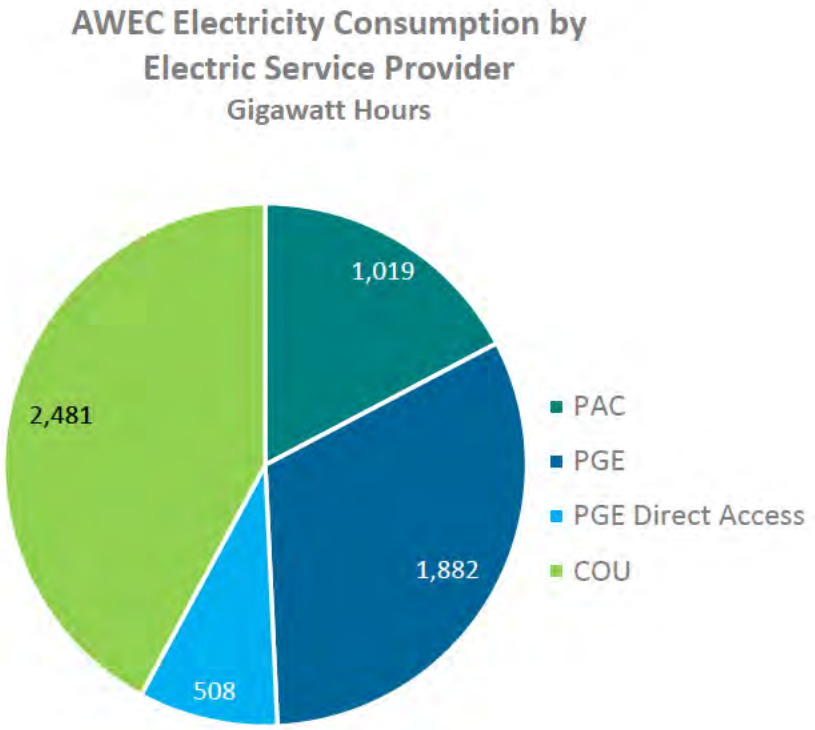
- Central Lincoln PUD
- Clatskanie PUD
- Columbia River PUD
- Emerald PUD
- Eugene Water and Electric Board
- Oregon Trail Electric Cooperative
- Salem Electric
- Springfield Utility Board
- Tillamook PUD
- Umatilla Electric Cooperative

PGE Direct Access

- Nineteen AWEC facilities

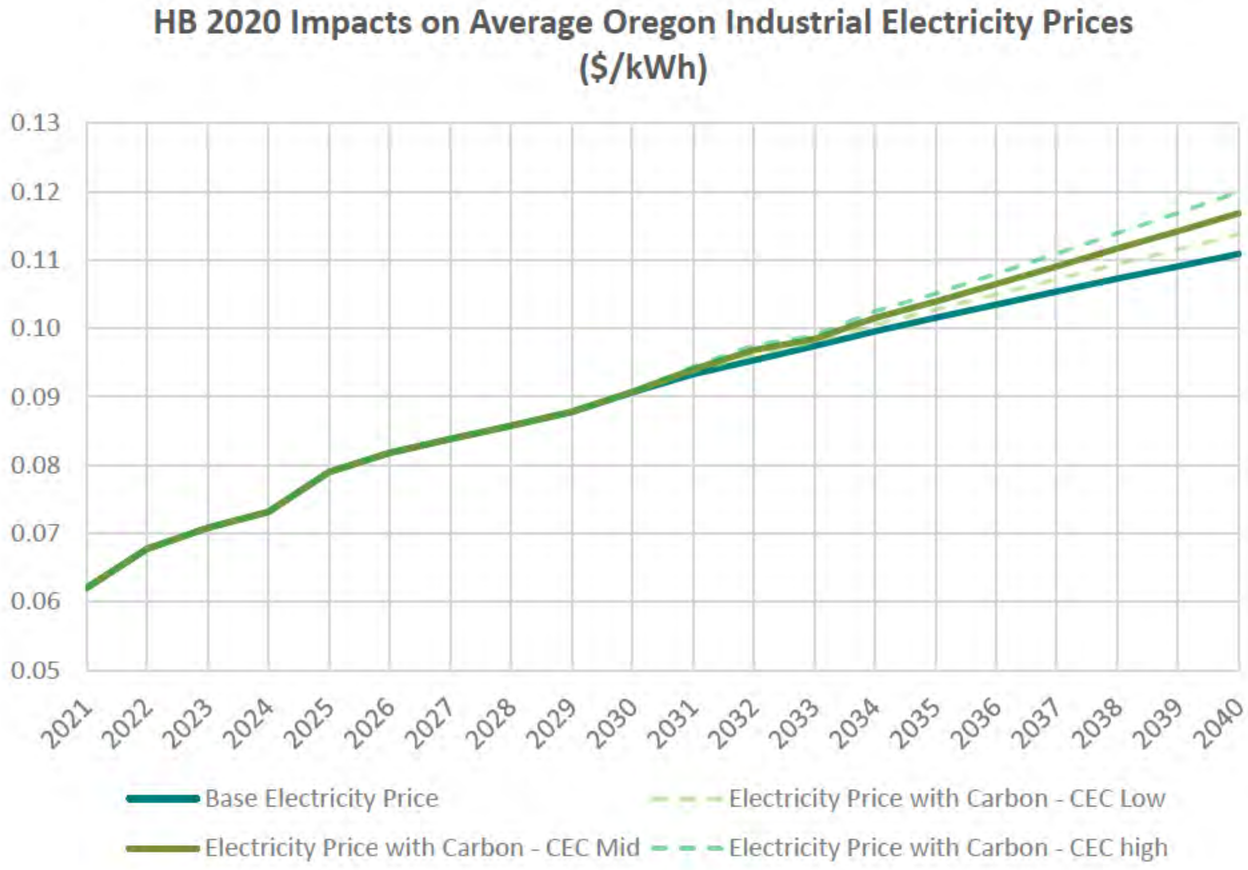
AWEC facility exposure to higher electricity costs is dependent its electricity servie supplier

- Pacific Power and Light and Portland General Electric (IOU) serve 49 percent of AWEC members' facilities power demand
- Consumer owned utilities (COU) supply 42 percent of AWEC facilities power
- Ten AWEC members' facilities obtain 9 percent of AWEC's total power supply from the wholesale market
- Electricity cost impacts will be a function of the carbon content of utilities' and marketers' electricity supplies
- Carbon content of power supplies from IOUs and wholesale electricity suppliers (direct access) is 20-30 times higher than Oregon's COUs



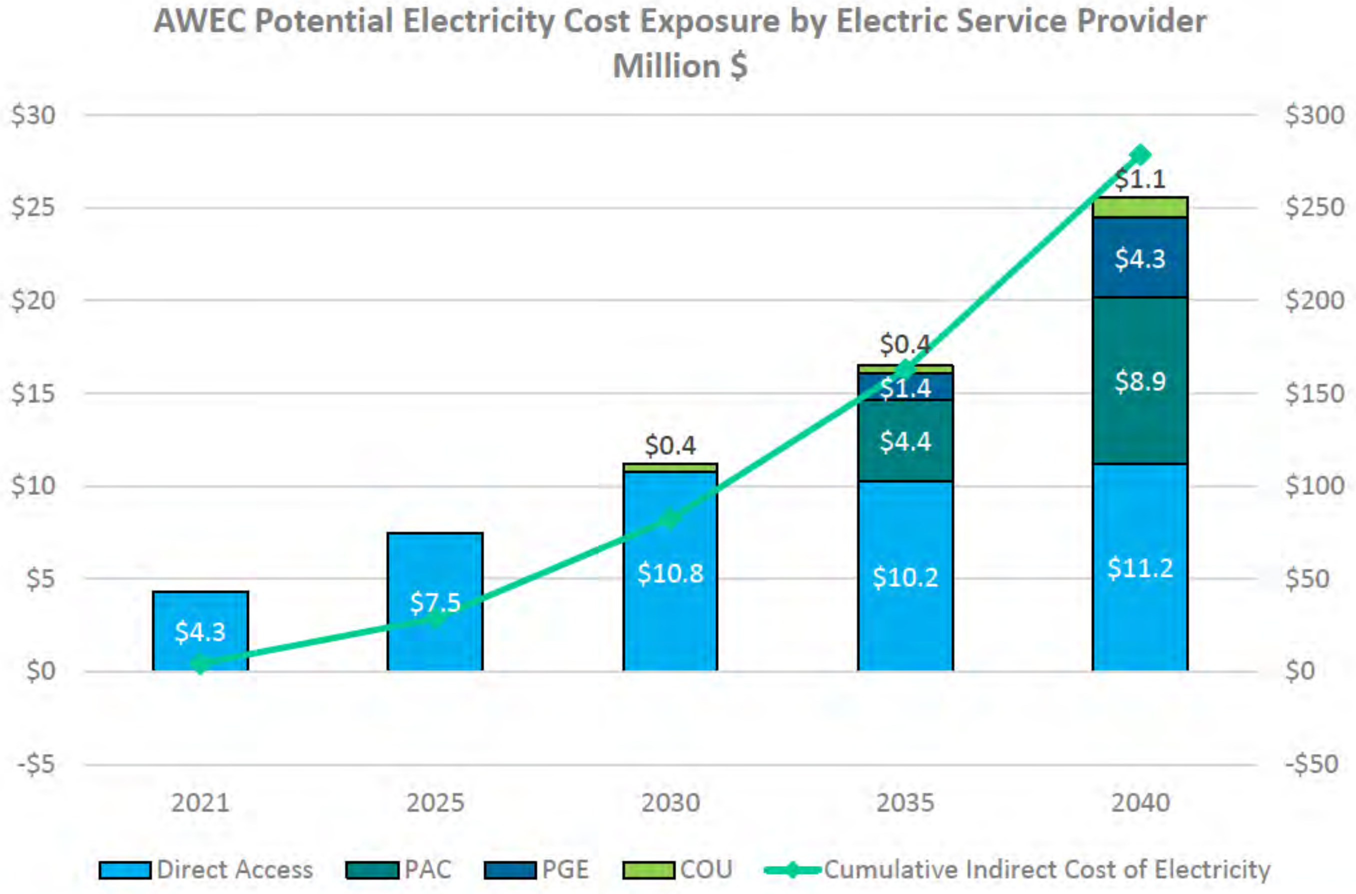
Impacts on electricity prices will in part be mitigated by the distribution of "no cost" allowances

- Over ninety percent of the power supplied to AWEC facilities will initially receive "no cost" allowances
- IOUs are allocated 100% allowances to cover forecasted emissions through 2030
- COUs receive 100% forecasted allowances in 2021 but the allocation decreases at the rate of the allowance budget starting in 2022
- Wholesale electricity suppliers do not receive allowances



AWEC facilities who are direct access customers will experience the largest electricity cost increases

- For 90 percent of the electricity supplied to AWEC members' facilities the electricity cost impacts should be minimal through 2030 but then increase sharply
- Electricity cost increases will be immediate and significant for direct access customers who represent nine percent of AWEC facilities electricity load
- Between 2030 and 2040 AWEC members' facilities are projected to spend an additional $176 million in added electricity costs due to HB 2020



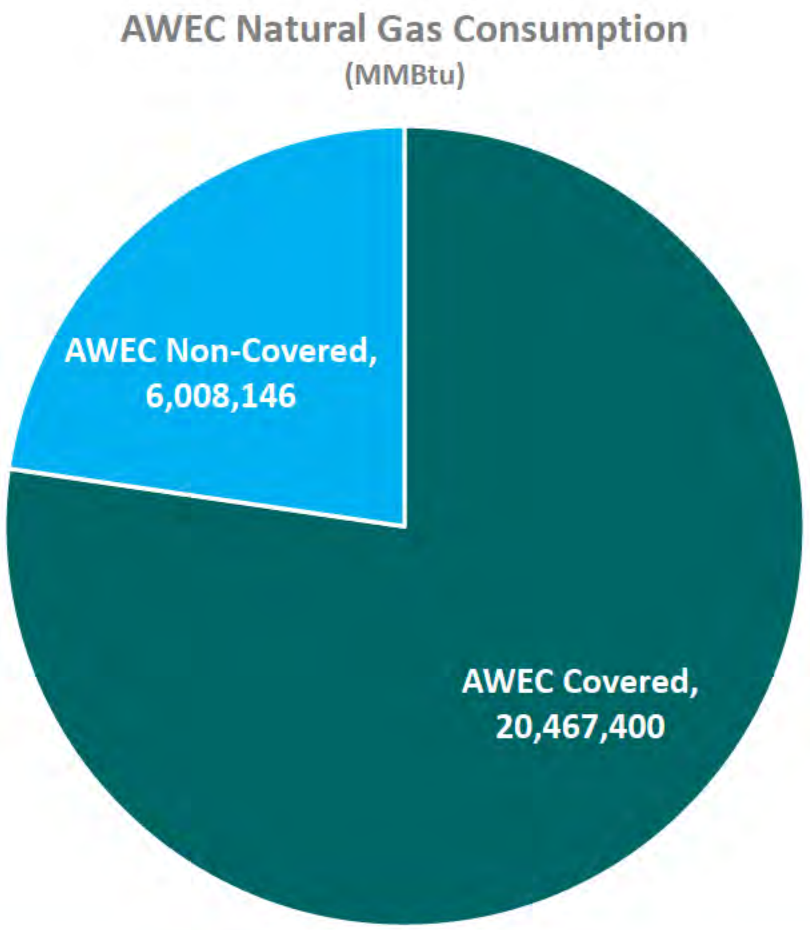
ENERGY STRATEGIES

Indirect Natural Gas Costs Impacts

Non-Covered AWEC Facilities

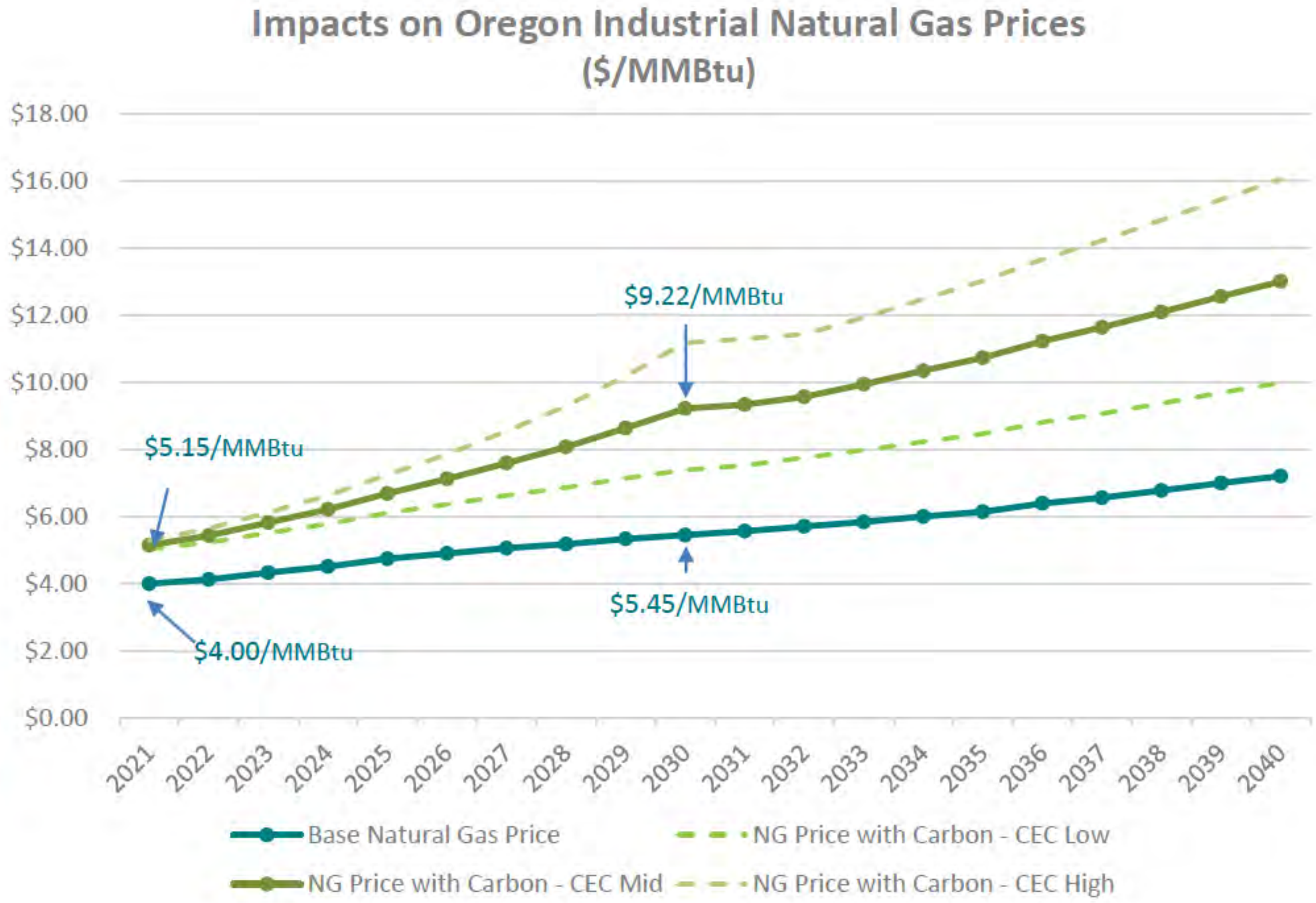
Twenty-nine percent of the natural gas consumption by AWEC members' facilities will be subject to cost increases

- Natural gas marketers will be required to purchase allowances for the emissions from natural gas sold to the remaining AWEC facilities not directly covered by the legislation
- Costs of allowances will be passed on through higher natural costs and affect 29 percent (6.0 million MMBtu) of natural gas consumed by AWEC members' facilities.
- The emissions from 71% of AWEC member facilities' natural gas consumption will be regulated as stationary point sources. The cost of allowances will not be passed through in higher natural gas prices



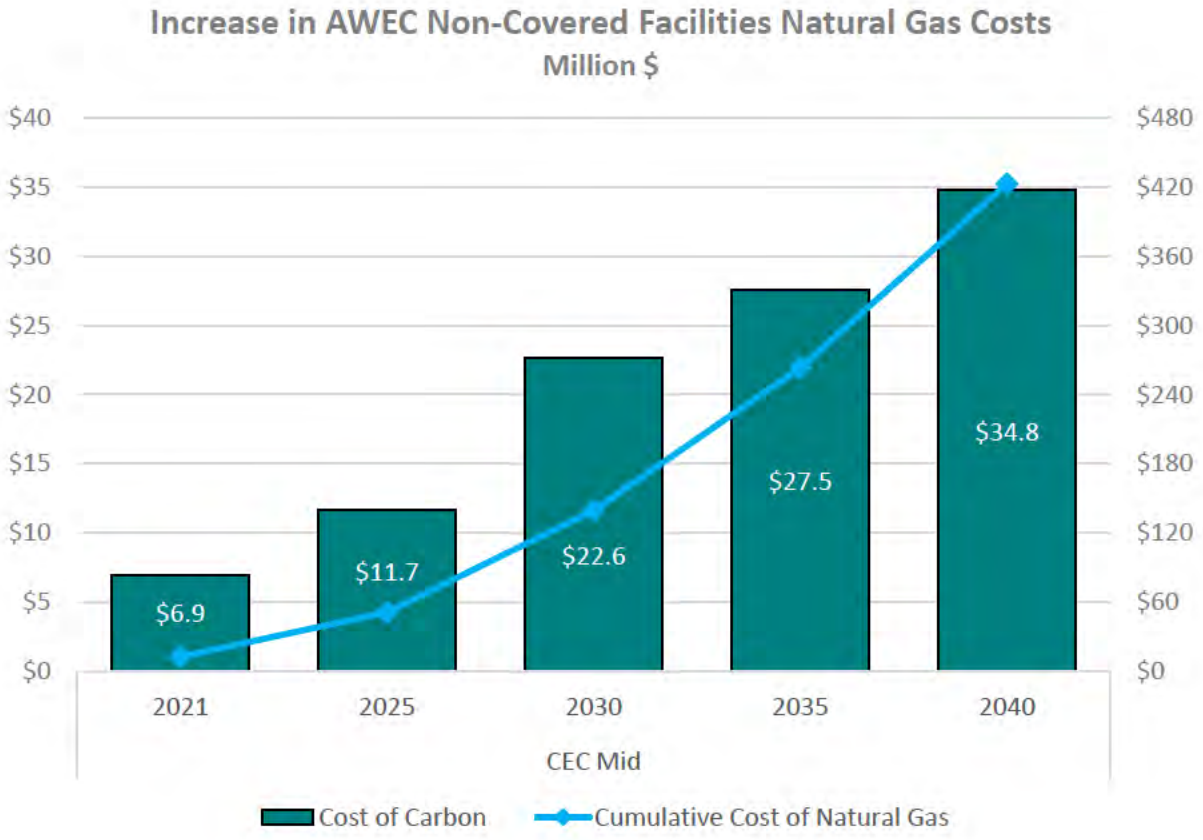
Increases in the price of natural gas will be dependent on the costs of allowances

- HB 2020 will have an immediate impact on natural gas prices
- In 2021 natural gas prices are estimated to increase 29 percent above the estimated base price of $4.00 per MMBtu assuming CEC Mid allowance prices
- By 2030 the price of natural gas is projected to be $3.77 higher than the forecasted base price of $5.45 per MMBtu, representing a 60 percent increase in price



AWEC facilities cost exposure to higher natural gas costs begins in 2021 and increases each year

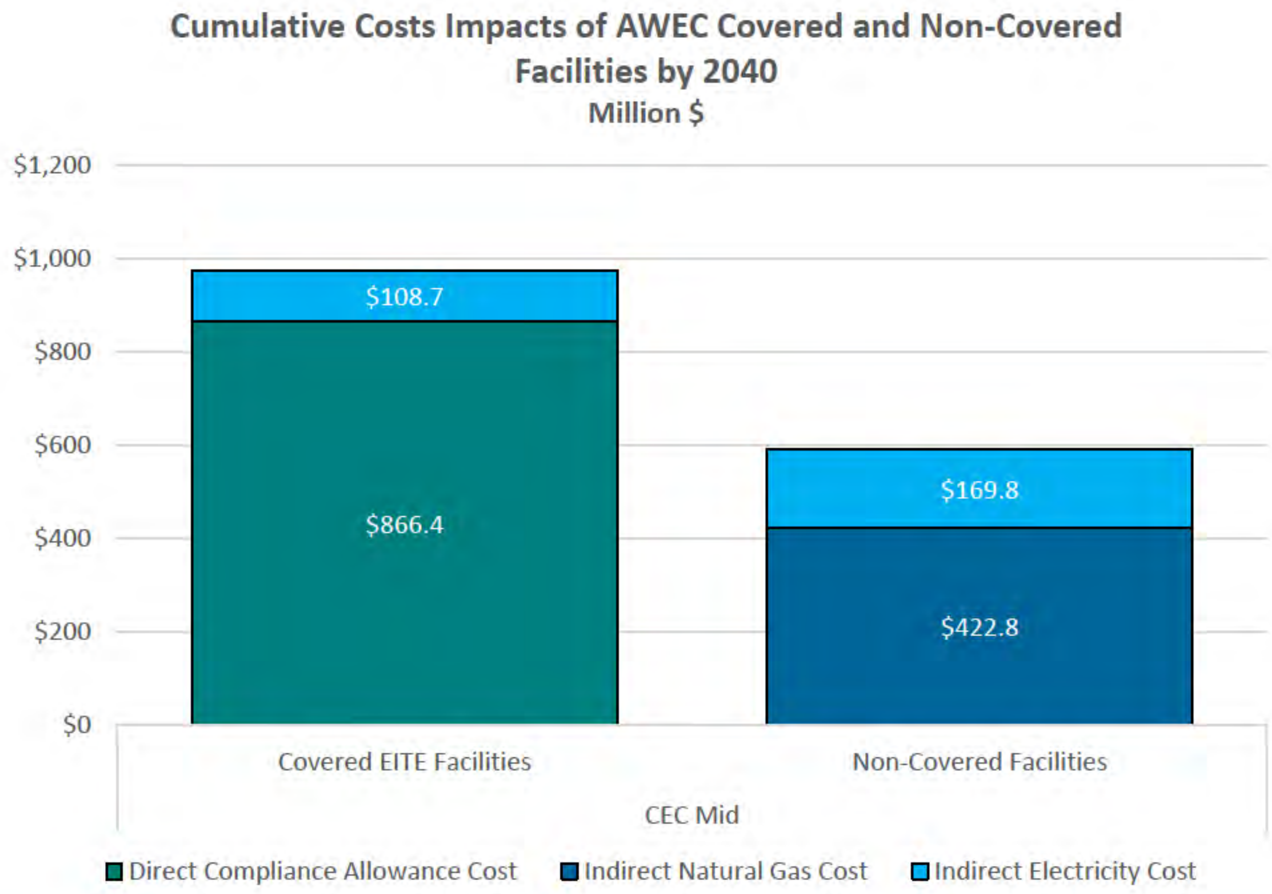
- Cost increases will be immediate and impact 25 percent of total natural gas consumed by AWEC members' facilities
- In 2021, AWEC facilities will spend an additional $6.9 million for natural gas above the $21.2 million they were projected to spend in the absence of HB 2020
- Between 2021 and 2040 non-covered AWEC members' facilities are projected to spend an additional $423 million in added natural gas costs due to HB 2020



Summary and Conclusions

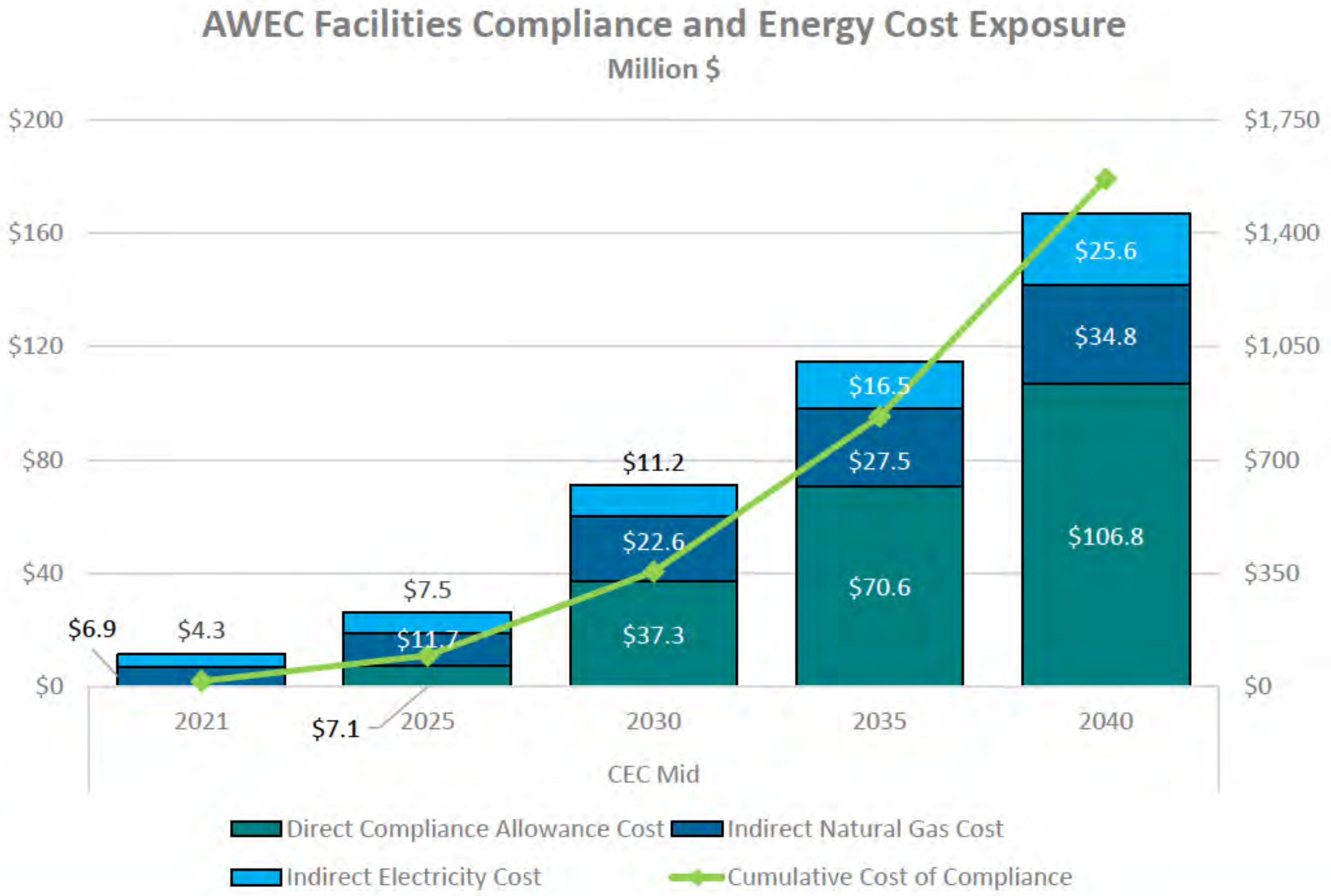
AWEC facilities compliance and energy cost impacts are potentially significant

- AWEC members' 12 covered facilities are projected to incur over $975 million in additional compliance and energy costs by 2040
  - $866 million spent complying with the cap and trade regulation
  - $109 million in additional energy costs
- Non-Covered facilities' cost impacts will be less but still total $593 million



AWEC members greatest exposure to HB 2020 are the costs 12 covered facilities will incur to purchase allowances

- The second largest cost impact on AWEC member facilities is from higher natural gas costs
- Distribution of "no cost" allowances to IOUs and COUs initially diminish the impacts on electricity costs to their customers
- Ccosts associated with higher electricity and natural gas prices represent 73% of the total cost impacts faced by AWEC members' facilities in 2025 and 48% in 2030
- In total, the cumulative additional costs HB 2020 imposes on AWEC members' facilities will exceed $350 million by 2030 and rise to over $1.5 billion by 2040



ENERGY STRATEGIES

Contact

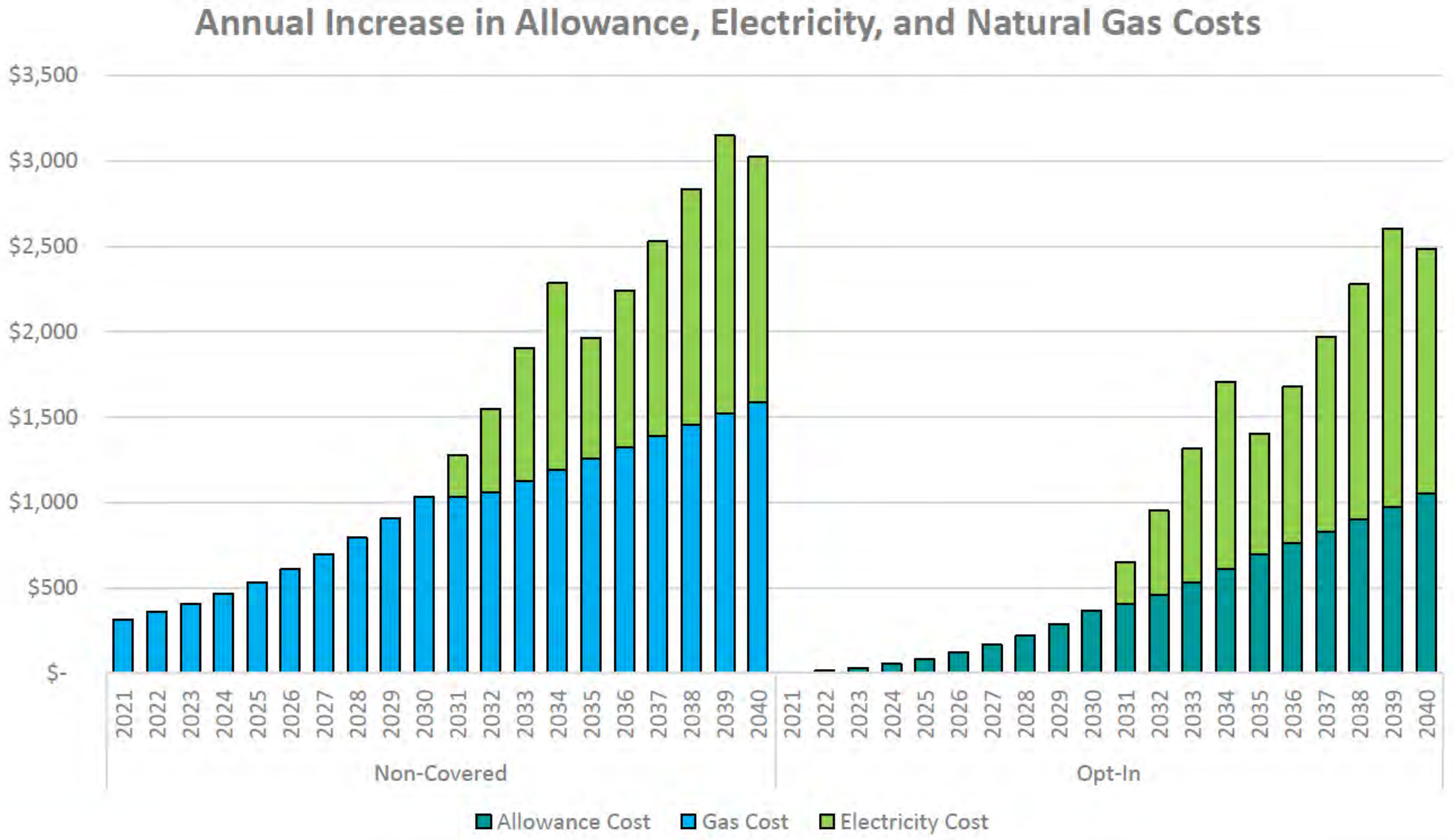
215 South State Street, Suite 200
Salt Lake City, Utah 84111
(801) 355-4365
energystrat.com

Contact

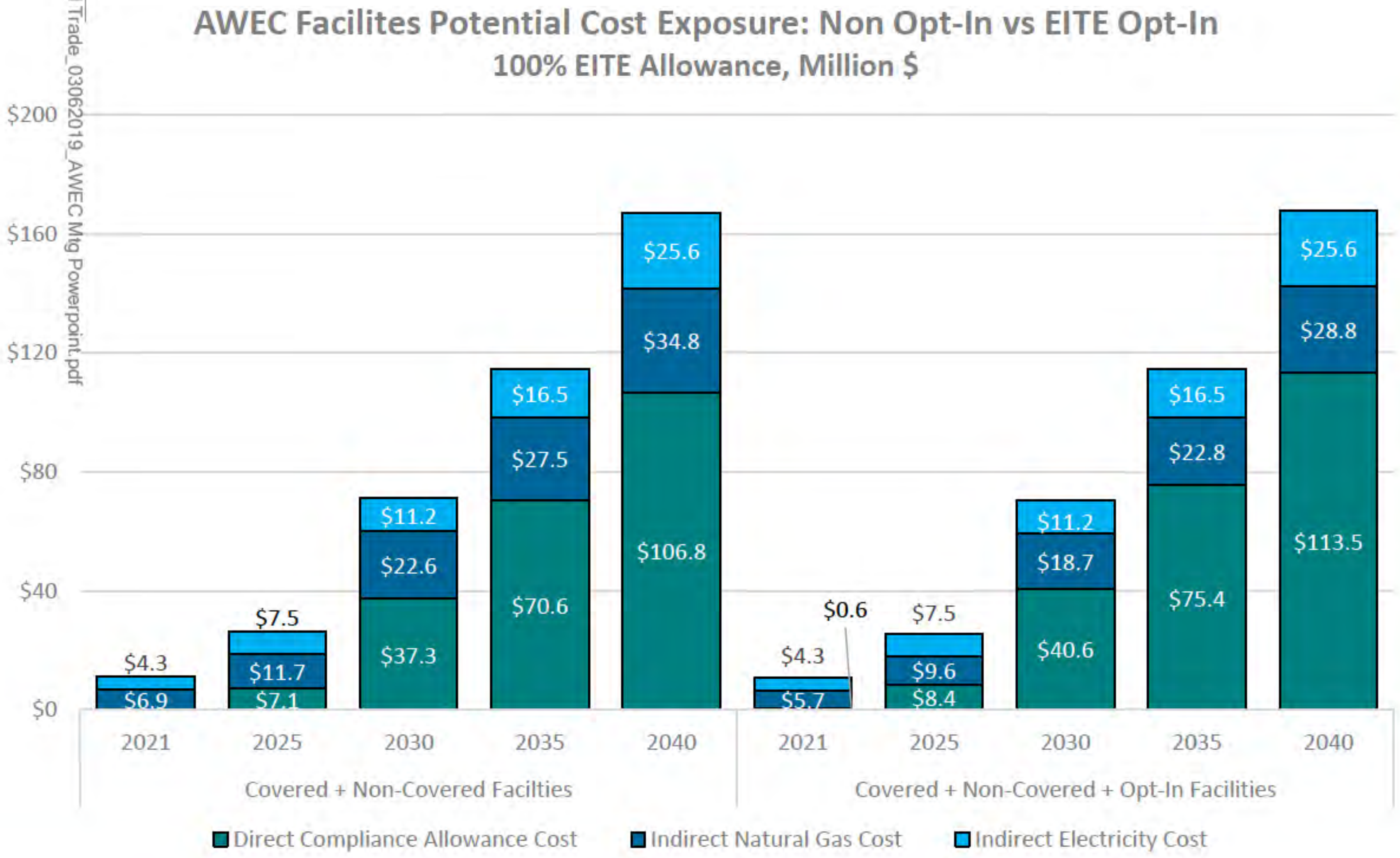
Jeff Burks, Principal jburks@energystrat.com
Daniel Ramirez, Consultant dramirez@energystrat.com

Additional Slides

Non-Covered vs Opt-in: Single Facility Example



Non-Covered vs Opt-in: All Possible Facilities



Cumulative Cost of Compliance (Million $)

	Non-Opt-In	Opt-In	Difference
2021	$16.5	$15.9	$0.6
2025	$95.2	$92.0	$3.2
2030	$354.7	$347.9	$6.8
2035	$833.9	$826.1	$7.8
2040	$1,567.8	$1562.2	$5.6

From:	Tony Hardenbrook
Sent time:	11/13/2018 07:42:40 AM
To:	Kelly Francone <kfrancone@energystrat.com>
Subject:	RE: Annual AWEC Member Meeting in Seattle on November 13th

Kelly,

I unfortunately cannot make the conference today. I will be tuned in, thanks.

R/
Tony

From: Kelly Francone <kfrancone@energystrat.com>
Sent: Wednesday, October 31, 2018 10:16 AM
To: Tony Hardenbrook <aharden2@uoregon.edu>
Cc: 'John Carr' <jcarr@awec.solutions>; Boz <vanhoutb@ohsu.edu>
Subject: Annual AWEC Member Meeting in Seattle on November 13th

Tony,

Please see the full meeting information below. The meetings will run from 8 AM to 3:30 PM at the Hilton Seattle Airport Hotel and Conference Center in the Crystal A room, which is located in the conference center. Breakfast will be served between 8:00 and 9:00. Please let me know if you have any other questions.

Dear AWEC Members:

AWEC will be hosting its annual member meeting on Tuesday, November 13th, in Seattle at the Seattle Airport Hotel and Conference Center from 8:00 to 1:00 pm. A seated breakfast will be served beginning at 8:00 am, with the business portion of the meeting scheduled from **9:00 am to 11:30 for electric members only. At 11:30 we will hold our annual meeting section for both electric and gas members** with lunch following. Our guest speaker will follow the luncheon**. For the natural gas members only**, the natural gas portion of the meeting will begin at 1:30 PST.

Our guest speaker will be Elliot Mainzer, BPA Administrator.

The annual meeting is important as we elect new officers and hope many of you can participate. Call-in information will be available when the agenda is issued. The complete documents will be sent out the day before the meeting.

We do not have a reduced hotel room rate, but right now a room can be reserved for $112 with three days cancellation using the "flexible rate".

Hilton at Seatac: http://www3.hilton.com/en/hotels/washington/hilton-seattle-airport-and-conference-center-SEAAHHH/index.html

Please RSVP at kfrancone@energystrat.com **only if you haven't already done so.**

Please let us know if you have any questions.

Kelly Francone
Consultant
Energy Strategies
215 S. State Street, Ste 200, SLC, UT 84111
801-355-4365
kfrancone@energystrat.com

From:	Tony Hardenbrook
Sent time:	10/31/2018 09:31:36 AM
To:	John Carr <jcarr@awec.solutions>
BCc:	Boz Van Houten; Alex Koleber
Subject:	RE: University of Oregon Membership

Thanks John and you can trust our confidence in the membership dues.

R/
Tony

From: John Carr <jcarr@awec.solutions>
Sent: Wednesday, October 31, 2018 9:28 AM
To: Tony Hardenbrook <aharden2@uoregon.edu>
Cc: Alex Koleber <akoleber@uoregon.edu>; Boz Van Houten <bozv@uoregon.edu>; 'Kelly Francone' <kfrancone@energystrat.com>
Subject: RE: University of Oregon Membership

Greetings Tony,

Yes, I would be happy for you to attend our November 13th Annual Meeting as my guest.

I've copied Kelly on this email. She will send you the info needed to attend the Annual Meeting.

In terms of process, I will be taking your membership request to the AWEC Board of Directors for approval on the evening of November 12th. I will be strongly supporting it.

Thank you for request for membership. You will find that we are member-focused, efficient and highly effective.

I would ask that you not share the proposed level of dues with other members or entities. I and my back office are the only ones who know the dues individual members pay.

Best regards,

John

From: Tony Hardenbrook <aharden2@uoregon.edu>
Sent: Wednesday, October 31, 2018 8:09 AM
To: John Carr <jcarr@awec.solutions>
Cc: Alex Koleber <akoleber@uoregon.edu>; Boz Van Houten <bozv@uoregon.edu>
Subject: RE: University of Oregon Membership

John,

Please consider this a formal request for membership, I also sent a request via the AWEC website.

It's a little late in the game, but is there a way for UO to attend the November 13th conference in Seattle?

Respectfully,
Tony

Tony Hardenbrook
Director of Utilities and Energy
Campus Planning and Facilities Management
University of Oregon
aharden2@uoregon.edu
541-346-9007

Safety * Continuity * Efficiency

From: Boz Van Houten
Sent: Tuesday, October 30, 2018 4:56 PM
To: John Carr <jcarr@awec.solutions>
Cc: Alex Koleber <akoleber@uoregon.edu>; Tony Hardenbrook <aharden2@uoregon.edu>
Subject: Re: University of Oregon Membership

Thanks for the membreship info, John!
We will discuss this internally and I will get back to you with our decision.

Cheers!
Boz Van Houten CEM
UO Energy Manager

-------- Original message --------
From: John Carr <jcarr@awec.solutions>
Date: 10/30/18 4:06 PM (GMT-08:00)
To: Boz Van Houten <bozv@uoregon.edu>
Cc: Alex Koleber <akoleber@uoregon.edu>
Subject: RE: University of Oregon Membership

Greetings Boz,

The annual AWEC assessment for UO would be $13,076, or $3,269/quarter. This would cover UO for both electric and natural gas issues.

Since it's late in the year, if UO becomes a member now, I wouldn't start charging for membership until the first quarter of 2019. I could probably work with you on the level of the first-quarter assessment too, if that is an issue.

If this is acceptable, please send me an email requesting membership for UO in AWEC. I'll bring the request before the AWEC Board of Directors at their November 12th evening meeting. I will strongly support approval of the request.

Best of regards,

John

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell:
Website: https://www.awec.solutions/
E-mail: jcarr@awec.solutions

From: Boz Van Houten <bozv@uoregon.edu>
Sent: Wednesday, October 24, 2018 10:42 AM
To: jcarr@awec.solutions
Cc: Alex Koleber <akoleber@uoregon.edu>
Subject: University of Oregon Membership

Hi John!
It's been an interesting month with the natural gas pipeline outage and resultant shortage. Really appreciated the timely

briefs on the situation from Ed as events unfolded.
Some news and more…

1. I am progressively transitioning out of my role as Energy Manager at OHSU ant into my new position of Energy Manager at University of Oregon in Eugene (my hometown). I am currently busy establishing a structured Energy Management Program at UO
2. Please include Chad Sorber, Director of Facilities (sorber@ohsu.edu), and Laura Jane Schaefer, Sustainability Coordinator (schaefel@ohsu.edu) in OHSU related communications.
3. I am interested in AWEC membership for UO. Please send me an application and indication of proposed fee, etc. UO annual energy use is: 86,908,482 kWh and 3,903,139 Therms. UO's primary utilities are EWEB (Municipal) for Electric and Water, and BP/IGI for Natural Gas. Please copy Alex on your reply.

Thanks!
Boz Van Houten
UO Energy Manager

Campus Planning and Facilities Management
University of Oregon

bozv@uoregon.edu
Desk: 541-346-2223
Mobile: [redacted]

Safety * Continuity * Efficiency

From:	Tony Hardenbrook
Sent time:	11/13/2018 07:45:58 AM
To:	John Carr <jcarr@awec.solutions>
Subject:	RE: University of Oregon Membership

Hi John,

Some issues at the central plant at UO have kept me from being able to attend today. I'll be tuned in using the call-in numbers provided. I apologize for missing the conference meeting in person, please let me know if UO will be able to become a member of AWEC, thanks.

R/
Tony

Tony Hardenbrook
Director of Utilities and Energy
Campus Planning and Facilities Management
University of Oregon
aharden2@uoregon.edu
541-346-9007

Safety * Continuity * Efficiency

From: John Carr <jcarr@awec.solutions>
Sent: Wednesday, October 31, 2018 9:28 AM
To: Tony Hardenbrook <aharden2@uoregon.edu>
Cc: Alex Koleber <akoleber@uoregon.edu>; Boz Van Houten <bozv@uoregon.edu>; 'Kelly Francone' <kfrancone@energystrat.com>
Subject: RE: University of Oregon Membership

Greetings Tony,

Yes, I would be happy for you to attend our November 13th Annual Meeting as my guest.

I've copied Kelly on this email. She will send you the info needed to attend the Annual Meeting.

In terms of process, I will be taking your membership request to the AWEC Board of Directors for approval on the evening of November 12th. I will be strongly supporting it.

Thank you for request for membership. You will find that we are member-focused, efficient and highly effective.

I would ask that you not share the proposed level of dues with other members or entities. I and my back office are the only ones who know the dues individual members pay.

Best regards,

John

From: Tony Hardenbrook <aharden2@uoregon.edu>
Sent: Wednesday, October 31, 2018 8:09 AM
To: John Carr <jcarr@awec.solutions>
Cc: Alex Koleber <akoleber@uoregon.edu>; Boz Van Houten <bozv@uoregon.edu>
Subject: RE: University of Oregon Membership

John,

Please consider this a formal request for membership, I also sent a request via the AWEC website.

It's a little late in the game, but is there a way for UO to attend the November 13th conference in Seattle?

Respectfully,
Tony

Tony Hardenbrook
Director of Utilities and Energy
Campus Planning and Facilities Management
University of Oregon
aharden2@uoregon.edu
541-346-9007

Safety * Continuity * Efficiency

From: Boz Van Houten
Sent: Tuesday, October 30, 2018 4:56 PM
To: John Carr <jcarr@awec.solutions>
Cc: Alex Koleber <akoleber@uoregon.edu>; Tony Hardenbrook <aharden2@uoregon.edu>
Subject: Re: University of Oregon Membership

Thanks for the membreship info, John!
We will discuss this internally and I will get back to you with our decision.

Cheers!
Boz Van Houten CEM
UO Energy Manager

-------- Original message --------
From: John Carr <jcarr@awec.solutions>
Date: 10/30/18 4:06 PM (GMT-08:00)
To: Boz Van Houten <bozv@uoregon.edu>
Cc: Alex Koleber <akoleber@uoregon.edu>
Subject: RE: University of Oregon Membership

Greetings Boz,

The annual AWEC assessment for UO would be $13,076, or $3,269/quarter. This would cover UO for both electric and natural gas issues.

Since it's late in the year, if UO becomes a member now, I wouldn't start charging for membership until the first quarter of 2019. I could probably work with you on the level of the first-quarter assessment too, if that is an issue.

If this is acceptable, please send me an email requesting membership for UO in AWEC. I'll bring the request before the AWEC Board of Directors at their November 12th evening meeting. I will strongly support approval of the request.

Best of regards,

John

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell:

Website: https://www.awec.solutions/
E-mail: jcarr@awec.solutions

From: Boz Van Houten <bozv@uoregon.edu>
Sent: Wednesday, October 24, 2018 10:42 AM
To: jcarr@awec.solutions
Cc: Alex Koleber <akoleber@uoregon.edu>
Subject: University of Oregon Membership

Hi John!
It's been an interesting month with the natural gas pipeline outage and resultant shortage. Really appreciated the timely briefs on the situation from Ed as events unfolded.
Some news and more…

1. I am progressively transitioning out of my role as Energy Manager at OHSU ant into my new position of Energy Manager at University of Oregon in Eugene (my hometown). I am currently busy establishing a structured Energy Management Program at UO
2. Please include Chad Sorber, Director of Facilities (sorber@ohsu.edu), and Laura Jane Schaefer, Sustainability Coordinator (schaefel@ohsu.edu) in OHSU related communications.
3. I am interested in AWEC membership for UO. Please send me an application and indication of proposed fee, etc. UO annual energy use is: 86,908,482 kWh and 3,903,139 Therms. UO's primary utilities are EWEB (Municipal) for Electric and Water, and BP/IGI for Natural Gas. Please copy Alex on your reply.

Thanks!
Boz Van Houten
UO Energy Manager

Campus Planning and Facilities Management
University of Oregon

bozv@uoregon.edu
Desk: 541-346-2223
Mobile: [redacted]

Safety * Continuity * Efficiency

From:	Tony Hardenbrook
Sent time:	03/13/2019 08:04:40 AM
To:	John Carr <jcarr@awec.solutions>
Subject:	RE: Invoice request

He should contact our dispersing department, I'll follow up. Thanks for letting me know.

From: John Carr <jcarr@awec.solutions>
Sent: Wednesday, March 13, 2019 7:35 AM
To: Tony Hardenbrook <aharden2@uoregon.edu>
Subject: RE: Invoice request

Hi Tony,

The reason I'm asking is that Chris Widdup (?) of U of O called me, wanting a copy of the invoice. I think he's in the media side of your organization. His number is 541.346.6823.

Could you follow up with him? I would rather keep you in the lead for anything that's internal at U of O.

If there is anything you need from me, just let me know.

Regards,

John

From: Tony Hardenbrook <aharden2@uoregon.edu>
Sent: Wednesday, March 13, 2019 7:24 AM
To: John Carr <jcarr@awec.solutions>
Subject: RE: Invoice request

Yes, sorry I was out yesterday. We did receive the invoice. We are a big organization, the invoice doesn't come directly to me- it goes to a different department to be processed. Thanks for following up.

R/
Tony

From: John Carr <jcarr@awec.solutions>
Sent: Wednesday, March 13, 2019 7:06 AM
To: Tony Hardenbrook <aharden2@uoregon.edu>
Subject: Invoice request

Hi Tony,

Just following up on my voice mail message yesterday.

Have you received an quarterly invoice from AWEC?

Thanks,

John

John Carr
Executive Director
Alliance of Western Energy Consumers
Office: 971.544.7169
Cell:
Website: https://www.awec.solutions/
E-mail: jcarr@awec.solutions

From:	Tony Hardenbrook
To:	"Kelly Francone"
Subject:	RE: AWEC Energy Data Request
Date:	Sunday, February 3, 2019 7:40:00 AM
Attachments:	AWEC UO FY18 Annual Utility Data.xlsx

Sorry for the delay.

We have several different accounts for gas and electricity at University of Oregon. I hope to see estimates for each account, the key one being our Central utility plant.

Attached is the information requested.

Thanks!

R/
Tony
Tony Hardenbrook
Director of Utilities and Energy
Campus Planning and Facilities Management
University of Oregon
aharden2@uoregon.edu
541-346-9007

Safety * Continuity * Efficiency

From: Kelly Francone <kfrancone@energystrat.com>
Sent: Tuesday, January 29, 2019 1:25 PM
To: Tony Hardenbrook <aharden2@uoregon.edu>
Cc: Jeff Burks <jburks@energystrat.com>
Subject: AWEC Energy Data Request

Dear Tony,

Energy Strategies has created a spreadsheet tool to estimate the direct and indirect cost to AWEC member facilities due to Oregon's proposed cap and trade regulation. The tool will estimate a facility's cost to purchase allowances if its emissions exceed 25,000 metric tons of $CO2_e$ and it is listed as a covered facility. (Our model currently projects 13 AWEC member facilities will be covered under the proposed cap and trade legislation.) The model will also calculate the potential cost exposure AWEC member facilities face due to increases in the cost of electricity and natural gas due to the costs of assigned to CO2e emissions associated with electricity and natural gas supplies. An example of the type of summary cost information we can provide each AWEC member and each facility is attached.

A critical component of the model is a database that includes information on over 95 AWEC member facilities in Oregon. Data includes company name, facility name, location by city and county, Primary 6-digit NAICS code identifier, electricity consumption (kWh), electricity service provider, and natural gas consumption (MMBtu). Company and plant name, location, and primary NAICS code information were compiled from public information included in EPA's ECHO 2017 data base https://echo.epa.gov/ and ODEQ's GHG Reporting program. Electricity consumption data was compiled from member responses to ICNU's 2015 Electricity Survey and natural gas consumption data was obtained from AWEC members 2016 reports filed with the ODEQ's GHG Reporting program.

The model's estimate of member facilities direct and indirect compliance costs is only as accurate as the information in the data base. A spreadsheet with the information we currently have for your Oregon facilities is attached.
Because the information is from different sources, covers different years and may be incomplete, we would like each AWEC company to review and verify the plant information in the attached spreadsheet file and make corrections as necessary, add facilities that we may have missed and update the electricity and natural gas consumption with 2017 data.

Please use the attached spreadsheet to update your company's facilities data. Also, please provide the period of time the data represents by including that in the title you save your spreadsheet under (e.g. 2017 Energy Usage for "company").

We would like to have this information as soon as possible. We expect the cap and trade legislation to be released this week and would like to be able to provide AWEC members a timely assessment of the cost exposure their facilities potentially face to cap and trade legislation. If you have questions regarding the AWEC facilities data base, the cap and trade cost model, and this request please call Energy Strategy's project lead, Jeff Burks. He can be reached at 801-355-4365 or by email at jburks@energystrat.com

We appreciate your quick response!

Kelly Francone
Senior Consultant
Energy Strategies
215 South State Street, Ste 200
Salt Lake City, Utah 84111
801-355-4365
Fax -801-521-9142

Company:	University of Oregon
Additional Facilties:	0

Additional Facility?	Company	Facility Name	County	City	Primary NAICS Code	Electricity Consumption: Annual Use (kWh)	Electricity Consumption: Reported Year	Electricity Consumption: Service Provider	Natural Gas Consumption: Annual Use (mmBtu)	Natural Gas Consumption: Reported Year	Natural Gas Consumption: Service Provider
Yes	University of Oregon	Central Power Station	Lane	Eugene	611310	50,441,773	7/1/17 - 6/30/18	EWEB	380,760	7/1/17 - 6/30/18	NW Natural
	University of Oregon	Housing	Lane	Eugene	611311	6,665,731	7/1/17 - 6/30/18	EWEB	1,365	7/1/17 - 6/30/18	NW Natural
	University of Oregon	EMU	Lane	Eugene	611312	2,492,356	7/1/17 - 6/30/18	EWEB	184	7/1/17 - 6/30/18	NW Natural
	University of Oregon	Athletics	Lane	Eugene	611313	3,463,812	7/1/17 - 6/30/18	EWEB	2,796	7/1/17 - 6/30/18	NW Natural
	University of Oregon	PE&Rec	Lane	Eugene	611314	3,324,310	7/1/17 - 6/30/18	EWEB	-	7/1/17 - 6/30/18	NW Natural
	University of Oregon	**All Facilities**				66,387,982			385,105		